The 63rd Annual Meeting of the International Society of Electrochemistry

Electrochemistry for Advanced Materials, Technologies and Instrumentation
19-24 August, 2012, Prague, Czech Republic

Contents list

Welcome Address

Dear colleagues, ladies and gentlemen,

It is our great pleasure to welcome you cordially to the 63rd Annual Meeting of the International Society of Electrochemistry hosted by Prague, Czech Republic.

Prague has been a natural economic and cultural center of the region spanning along the Vltava river for more than one millennium. In this city virtually every step exposes you to the course of the history rich with architecture and artistry. For years Prague mixed intellectual influences originating from Slavic, German and Jewish cultural backgrounds and the legacy of Kafka, Dvorak or Mucha can still be felt today. The spirit of past and architectural uniqueness is not the only facet Prague offers to today's visitors. Prague is also a bustling industrial, governmental, scientific and educational center of the whole country.

Prague is a city that has a special relationship with electrochemistry dating back to the 1920s. Polarographic methods of electrochemical analysis were developed in Prague starting the modern experimental electrochemistry. The city also has often facilitated fruitful meetings of the electrochemical community. Czech electrochemists hosted in Prague the 1st Polarographic Congress in 1951, the 21st CITCE Meeting in 1970, and the 41st ISE Meeting in 1990, organized jointly with the J. Heyrovsky Centennial Congress on Polarography. Now Prague opens its gates to the electrochemical community for a fourth time.

The Organizing Committee along with the Symposia Organizers prepared the 63rd Annual ISE Meeting focused on "Electrochemistry for Advanced Materials, Technologies and Instrumentation". The Meeting will outline the achievements and challenges of the contemporary electrochemistry both on the fundamental and applied levels, representing the societal needs in various fields ranging from energy storage and industrial electrolysis to new material preparation and biologically oriented analytical applications. The conference consists of 15 Symposia sponsored by all Divisions of the ISE. The Symposia Organizers have paid particular attention to the preparation of the scientific program emphasizing the most pressing issues of the field as well as outlining the likely future directions of its development.

Regardless of all the efforts extended by the Organizing Committee, Symposia Organizers and the Executive Committee so far, the Meeting cannot truly succeed without the key contributors – the participants themselves. We, therefore, sincerely hope that your particular contribution to the scientific program and the subsequent discussion will help to make the 63rd Annual ISE Meeting a successful and memorable one.

Zdeněk Samec and Petr Krtil
Co-Chairs
Organizing Committee, 63rd ISE Annual Meeting

International Society of Electrochemistry
Rue de Sébeillon 9b
1004 Lausanne
Switzerland

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Organizing Committee

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Petr Krtil, *Czech Republic*

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Sharon Roscoe, *Canada*

Symposium Organizers

Symposium 1: Recent Advances in Electrochemical Instrumentation and Electrodes

Günther Wittstock (Coordinator), University Oldenburg, Germany
Fethi Bedioui, ENSCP Paris, France
Toh Chee Seng, National Technical University Singapore, Singapore
Tomáš Navrátil, J. Heyrovský Institute of Physical Chemistry, Prague, Czech Republic

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Elena Ferapontova (Coordinator), Aarhus University, Denmark
Taek Dong Chung, Seoul National University, Korea
Lo Gorton, Lund University, Sweden
Miroslav Fojta, Institute of Biophysics, Brno, Czech Republic

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: From Biosensors to Biofuel Cells

Alexander Kuhn (Coordinator), Université de Bordeaux, France
Evgeny Katz, Clarkson University, Potsdam, USA
Woonsup Shin, Sogang University, Korea
Wolfgang Schuhmann, Ruhr University Bochum, Germany
Jiří Barek, Charles University, Prague, Czech Republic

Symposium 4: Advanced Batteries and Electrochemical Capacitors

Elzbieta Frackowiak (Coordinator) Poznan University of Technology, Poland
Martin Winter, Muenster University, Germany
Robert Kostecki, Lawrence Berkeley National Laboratory, USA
Shinichi Komaba, Tokyo University, Japan

Symposium 5: Fuel Cells: Materials, Properties, Performance and Durability

Deborah Jones (Coordinator), CNRS and University of Montpellier 2, France
Sanjeev Mukerjee, Northeastern University, Boston, USA
Peter Strasser, Technical University Berlin, Germany

Symposium 6: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Alejandro Franco (Coordinator), CEA, Grenoble, France
Kourosh Malek, NRC-IFCI, Vancouver, Canada
Yann Bultel, INPG, Grenoble, France

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Kurt Hebert (Coordinator), Iowa State University, USA
Patrik Schmuki, University of Erlangen-Nuremberg, Germany
Josef Krýsa, Prague Institute of Chemical Technology, Czech Republic

Symposium 8: Electroactive Polymeric and Inorganic Materials

Vessela Tsakova (Coordinator), Institute of Physical Chemistry, Sofia, Bulgaria
Mikhail Vorotyntsev, Institut de Chimie Moléculaire, Dijon, France
Jaroslav Stejskal, Institute of Macromolecular Chemistry, Prague, Czech Republic

Symposium 9: Corrosion Science and Engineering

Monica Santamaria (Coordinator), University of Palermo, Italy
Nick Birbilis, Monash University, Australia
Pavel Novák, Prague Institute of Chemical Technology, Czech Republic

Symposium 10: Electrochemical Process Engineering and Technology

Karel Bouzek (Coordinator), Prague Institute of Chemical Technology, Czech Republic
Ann Cornell, Royal Institute of Technology, Stockholm, Sweden
François Lapicque, CNRS Nancy, France
Takayuki Homma, Waseda University, Japan

Symposium 11: Intermediates and Mechanisms at a Molecular Level

Jiří Ludvík (Coordinator), J. Heyrovský Institute of Physical Chemistry, Prague, Czech Republic
Marilia Goulart, Federal University of Alagoas, Brazil
Patrizia Mussini, University of Milano, Italy
Bernd Speiser, University Tuebingen, Germany

Symposium 12: Photoelectrochemistry, Electrochromism and Electrochemiluminescence

Magdaléna Hromadová (Coordinator), J. Heyrovský Inst. of Physical Chemistry, Prague, Czech Republic
Frantisek Hartl, University of Reading, United Kingdom
Jay Wadhawan, University of Hull, United Kingdom
Francesco Paolucci, University of Bologna, Italy

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Alexei Kornyshev (Coordinator), Imperial College London, United Kingdom
Angel Cuesta, Institute of Physical Chemistry, CSIC, Madrid, Spain
Zhong-Qun Tian, Xiamen University, China
Petr Krtil, J. Heyrovský Institute of Physical Chemistry, Prague, Czech Republic

Symposium 14: Electrochemistry at Liquid-Liquid Interfaces

Takashi Kakiuchi (Coordinator), Kyoto University, Japan
Hubert H. Girault, EPFL, Lausanne, Switzerland
Vladimír Mareček, J. Heyrovský Institute of Physical Chemistry, Prague, Czech Republic
Zdeněk Samec, J. Heyrovský Institute of Physical Chemistry, Prague, Czech Republic

Symposium 15: General Session

Elisabet Ahlberg, University of Gothenburg, Sweden
Waldfried Plieth, Technical University Dresden, Germany

Tutorial Lectures

Sunday, 19 August, 2012

Location: Tycho

14:30 to 18:00

X-ray absorption spectroscopy in electrochemical research

David Ramaker, *George Washington University, Washington DC, USA*

Understanding Electrocatalytic Pathways using In Operando XAS: Theory and Practice.
The talk will layout the foundation of this spectroscopy and bring it to life with examples of adsorbate binding sites and particle morphology on Pt based electrocatalysts.

Sanjeev Mukerjee, *Northeastern University, Boston MA, USA*

Understanding Electrocatalytic Pathways in Complex Organic and Inorganic Composites in Aqueous and Non Aqueous Environments.

The talk will cover the applications to study the inner and outer-sphere charge transfer processes and Li-air batteries.

Location: Kepler

14:30 to 16:00

Modelling and simulation of complex electrochemical systems: challenges and strategies

Oleksiy Klymenko, *Ecole Normale Supérieure, Paris, France*

This tutorial lecture aims to give an overview of contemporary approaches to model complex electrochemical reactions under a variety of conditions including micro- and nano-electrodes. It will be demonstrated how the size and shape of the electrode (which determine the peculiarities of mass transport in the system for ultramicroelectrodes), the nature and rate of reactions, etc., affect the corresponding mathematical models.

16:30 to 18:00

The pH concept in the 21st century

Robert de Levie, *Georgetown University, Washington DC, USA*

We owe the concept and name-giving of pH to Friedenthal (1904) and Sørensen (1909) respectively. Since that time, ionic concentrations are no longer determined by conductometry, Lewis introduced the concept of activity, and Debye & Hückel gave its quantitative expression in sufficiently dilute solutions. Over time, these developments have led to a quite different concept of pH, which has not had the scrutiny it deserves. This lecture will explore

(1) What is required for a practically useful definition of pH?
(2) Is the current IUPAC recommendation compatible with thermodynamic data?
(3) Are there practical downsides to following the current IUPAC recommendations?
(4) Are there ways to reconcile the problems implied in the above questions?

Plenary Lectures

Location: Meridian

Monday, 20 August, 2012

09:40 to 10:40

Jens K. Norskov
(SUNCAT Center for Interface Science and Catalysis, SLAC National Accelerator Laboratory, Menlo Park, USA)

(Photo-)electro-catalytic fuel production

Tuesday, 21 August, 2012

08:30 to 09:30

Kazunari Domen
(Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan)

Photocatalytic and photoelectrochemical water splitting based on oxynitride materials

Thursday, 23 August, 2012

08:30 to 09:30

Katharina Krischer
(Department of Physics, Nonequilibrium Chemical Physics, München, Germany)

Cooperative Phenomena at the Electrified Interface

Friday, 24 August, 2012

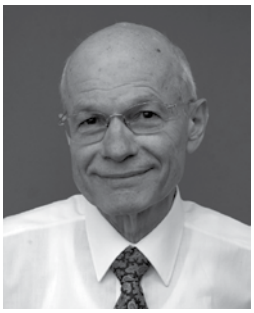
08:30 to 09:30

Mark E. Meyerhoff
(Department of Chemistry, The University of Michigan, Ann Arbor, USA)

Electrochemical Sensors in Medicine: Meeting Needs for the 21st Century

ISE Prize Winners 2011

Frumkin Memorial Medal



Dieter Kolb, *University of Ulm, Germany*

Prix Jacques Tacussel

Kingo Itaya, *Tohoku University, Sendai, Japan*

12:00 to 12:40, Tuesday, 21 August 2012, Symposium 13

Direct Visualization of Electrode Processes with Single Atomic Step Resolution by LCM-DIM

Katsumi Niki Prize for Bioelectrochemistry

Wolfgang Schuhmann, *Ruhr-Universität Bochum, Germany*

12:00 to 12:20, Monday, 20 August 2012, Symposium 3

A short journey through bioelectrochemistry. Electron-transfer pathways between enzymes and electrodes as a prerequisite for the design of biosensors and biofuel cells

Alexander Kuznetsov Prize for Theoretical Electrochemistry

Wolfgang Schmickler, *University of Ulm, Germany*

08:30 to 09:10, Wednesday, 22 August 2012, Symposium 13

A Model for Electrocatalytic Reactions

Tajima Prize

Hogan Yu, *Simon Fraser University, Canada*

17:20 to 17:40, Tuesday, 21 August 2012, Symposium 2

DNA Mechatronics: Designed Duplex/Quadruplex Constructs as Electronic Switches

Hans-Jürgen Engell Prize

Jamil Elias, *EMPA, Thun, Switzerland*

11:00 to 11:20, Tuesday, 21 August 2012, Symposium 7

Nanostructured Solar Cells Based on Electrodeposited Ordered Arrays of Urchin-like Building Blocks

ISE Prize for Environmental Electrochemistry

Cristina Saez, *Universidad de Castilla La Mancha, Ciudad Real, Spain*

14:20 to 14:40, Tuesday, 21 August 2012, Symposium 10

The treatment of actual wastewaters using electrochemical techniques

ISE Prize for Applied Electrochemistry

Frederic Maillard, *LEPMI/CNRS, Grenoble, France*

14:20 to 14:40, Thursday, 21 August 2012, Symposium 5a

Durability of bimetallic alloys in PEMCs: advances and controversies

Oronzio and Niccolò De Nora Foundation Young Author Prize

Meng Li, *Brookhaven National Laboratory, Upton, NY, USA*

Electrochimica Acta Travel Award Winners

Doris Grumelli
Vanesa Ruiz Ruiz

ISE Travel Award Winners

Prabeer Barpanda
Shulei Chou
Jakub Jirkovský
Alan Le Goff
Yann Leroux
Mauro Pasta
Yu Ren
Dodzi Zigah

Special Meetings

Monday, 20 August, 2012

Opening Ceremony
09:00 to 09:40 › Meridian

Monday, 20 August, 2012

Division Officers Meeting- Luncheon Meeting
12:45 to 14:00 › Taurus

Monday, 20 August, 2012

Regional Representatives Meeting - Luncheon Meeting
12:45 to 14:00 › Virgo

Tuesday, 21 August, 2012

Council Meeting -Luncheon Meeting
12:45 to 14:00 › Virgo

Thursday, 23 August, 2012

General Assembly
11:45 to 12:45 › Meridian

Division Luncheon Meetings
13:00 to 14:00
Division 1 Analytical Electrochemistry › Aquarius
Division 2 Bioelectrochemistry › Taurus
Division 3 Electrochemical Energy Conversion and Storage › Kepler
Division 4 Electrochemical Materials Science › Virgo
Division 5 Electrochemical Process Engineering and Technology › Stella
Division 6 Molecular Electrochemistry › Tycho
Division 7 Physical Electrochemistry › Leo

Friday, 24 August, 2012

Closing Ceremony
12:30 to 12:50 › Zenit

See room locations on back cover

Overall Schedule by Day

	Sunday 19.8	Monday 20.8	Tuesday 21.8	Wednesday 22.8	Thursday 23.8	Friday 24.8
08:00-08:30		Registration opens	Registration opens	Registration opens	Registration opens	
8:30			Plenary Session	Oral Presentations	Plenary Session	Plenary Session
09:00-09:20		Opening Ceremony				
09:20-09:40						
09:40-10:00		Plenary Session	Oral Presentations		Oral Presentations	Oral Presentations
10:00-10:20						
10:20-10:40			Coffee Break	Coffee Break (10:10)	Coffee Break	Coffee Break
10:40-11:00		Coffee Break	Oral Presentations	Oral Presentations	Oral Presentations	Oral Presentations
11:00-11:20		Oral Presentations				
11:20-11:40						
11:40-12:00					General Assembly	
12:00-12:20						
12:20-12:40						Closing Ceremony
14:00	Registration opens	Lunch Division & Reg. Rep. Meetings	Lunch Council Meeting	Excursions	Lunch Division Meetings	
14:20-14:40	Tutorial Lectures	Oral Presentations	Oral Presentations		Oral Presentations	
14:40-15:00						
15.00-15.20						
15:20-15:40						
15:40-16:00						
16:00-16:20						
16:20-16:40		Coffee Break	Coffee Break		Coffee Break	
16:40-17:00		Oral Presentations	Oral Presentations		Oral Presentations	
17:00-17:40						
18:00	Registration closes					
18:00-18:20	Welcome Reception					
18:20-20:00		Poster Presentations & Exhibitor Reception	Poster Presentations Reception			

Poster presentation session 1

Symposium 1, 3, 4, 7, 11, 12, 15

Poster set-up Monday: 08:30-12:00 *See poster locations map on page 203*
Poster take-down Tuesday: 14:00

Poster Presentations: Monday, 20 August: 18:30-20:00

Poster presentation session 2

Symposium 2, 5, 6, 8, 9, 10, 13, 14

Poster set-up Tuesday: 14:30-17:00 *See poster locations map on page 204*
Poster take-down Thursday: 16:00

Poster Presentations: Tuesday, 20 August: 18:30-20:00

General Information

The Registration Desk and the ISE DESK are located on the 3rd floor of the conference premises in the **Clarion Congress Hotel**, Freyova 33, Prague 9

Registration Hours during the Meeting

Sunday, 19 August 13:30-18:00
Monday, 20 August 08:00-18:00
Tuesday, 21 August 08:00-18:00
Wednesday, 22 August 08:30-12:00
Thursday, 23 August 08:30-18:00
Friday, 24 August 09:00-11:00

On Site Registration Fees

Regular (ISE non-members) .....590 Euro
Regular ISE members .....480 Euro
Student (ISE non-members).....220 Euro
Student ISE members.....170 Euro
Regular and Student Registration fees include: Admission to all scientific and exhibition sessions, three lunches (Monday, Tuesday and Thursday), welcome reception and exhibition reception, coffee breaks, conference bag, program book and abstract CD-ROM.

Lunches

Lunch will be provided on the conference premises in the Clarion Congress Hotel.
Monday, Tuesday and Thursday 12:30-14:10

Coffee Breaks

Monday Morning 10:40-11:00
Tuesday and Friday Morning.....10:20-10:40
Wednesday Morning 10:10-10:30
Afternoons (except Wednesday and Friday) 16:20-16:40

Internet Service

Free wireless internet service is provided on the conference premises in the Clarion Congress Hotel.

Accompanying Persons

Accompanying persons do not have to register but are not allowed to attend the lectures.

Publications

A special issue of the Society's journal, Electrochimica Acta, is planned based on selected original contributions made at the conference. Selection will be made by an international editorial Committee comprising the following Editors and Guest Editors, one for each of the Symposia in which the meeting is articulated:

Symposium 1 Günther Wittstock, Symposium 2 Elena Ferapontova, Symposium 3 Alexander Kuhn, Symposium 4 Shinichi Komaba, Symposium 5 Deborah Jones, Symposium 6 Yann Bultel, Symposium 7 Kurt Hebert, Symposium 8 Vessela Tsakova, Symposium 9 Nick Birbilis, Symposium 10 Karel Bouzek, Symposium 11 Patrizia Mussini, Symposium 12 Frantisek Hartl, Symposium 13 Angel Cuesta, Symposium 14 Zdeněk Samec

The action of the editorial Committee will be co-ordinated by Sergio Trasatti, Editor-in-Chief of Electrochimica Acta.
The Special Issue will accommodate ca. 140 papers. Submission is only on invitation of one of the Guest Editors. Submission time window: 25 August - 30 November 2012.

Social Program

Welcome Reception

Sunday, 19 August, 18:00-20:00 on the 3rd floor of the conference premises in the Clarion Congress Hotel.

Exhibitor and Poster Reception

Monday, 20 August, 18:30-20:00 on the 2nd and 3rd floor of the conference premises in the Clarion Congress Hotel.

Poster Reception

Tuesday, 21 August, 18:30-20:00 on the 2nd and 3rd floor of the conference premises in the Clarion Congress Hotel.

Wednesday, 22 August

Excursions

You can choose among 8 different excursions that will be organized on Wednesday afternoon, 22 August, 2012. All excursions depart from the 1st floor in front of the Clarion Congress Hotel at 14:00 with English speaking tour guides.

1) Prague Castle Tour

Departure at 14:00, Return at 17:30, Price per person: 42 Euro

Prague Castle, former seat of Czech Kings with millennial history and architecture. You will take a walk through the Prague Castle courtyards, while learning about the Castle's history, and you will visit the interiors of the Old Royal Palace, St. Georges Basilica, St. Vitus Cathedral and Rožmberk Palace.

2) City Tour by Historical Tram

Departure at 14:00, Return at 16:30, Price per person: 35 Euro

This tour will show you one of the most beautiful parts of Prague. First you will take a ride by a historical tram from the starting point – Střešovice station, to Malostranská station with a magnificent view of Prague. After crossing the Manes Bridge you will see Prague Castle and Rudolfinum (seat of the Czech Philharmonic Orchestra) at Staroměstská station. Then you will see Art Nouveau buildings along the Vltava River embankment, The National Theatre, Wenceslas Square, náměstí Republiky and Strossmayerovo náměstí and get back to the Střešovice station. From there you will return by bus to the Clarion Congress Hotel Prague.

3) Prague Jewish Town

Departure at 14:00, Return at 17:00, Price per person: 41 Euro

Prague Jewish Town, also called Josefov (after Emperor Joseph), settled more than 1,000 years ago. Our tour starts with a walk through Old Town. We will pass the place where Franz Kafka grew up and enter the original Jewish quarter. Our guide will tell you about the history of the former Jewish ghetto and about the oldest synagogue in Central Europe, the Staronová (Old-New) Synagogue. You will visit the Old Jewish Cemetery as well as several synagogues that form part of the unique Jewish Museum complex.

4) Tour of Prague Gardens

Departure at 14:00, Return at 18:00, Price per person: 37 Euro

The thematic focus of this tour are the most beautiful gardens of Prague. We will start at the Prague Castle, which was founded in the 9th century and since 1918 it has been the seat of Czech Presidents. On the southern side of the Prague Castle there is a unique complex of Italian terraced gardens, which belonged to the largest fully-preserved and recently restored public gardens of their kind. The complex, which covers 7711 square meters is called Ledebourg gardens and consists of five consecutive and interconnected gardens. Thanks to their beauty and size, these gardens under the Prague Castle are perfectly suitable for walking. We will continue to the Lesser Town Square dominated by the Church of St. Nicholas and then to the Vrtba garden. The Vrtba Garden is situated on the slope of Petřín Hill and is one of the most precious and beautiful of Prague's Baroque gardens.

5) Karlštejn Castle

Departure at 14:00, Return at 18:30, Price per person: 40 Euro

This half-day trip takes you to the Karlštejn Castle, built in the 14th century, on the top of an inaccessible cliff above Berounka River. The tour takes you to a historical site where the crown jewels and personal relics of the

Holy Roman Emperor Charles IV were stored. The castle is surrounded by a beautiful and a romantic countryside and it is the most visited castle in the Czech Republic. This unique castle lies 38 km far from Prague.

6) Kutná Hora – UNESCO
Departure at 14:00, Return at 19:30, Price per person: 43 Euro
Kutná Hora, a medieval centre of silver-mining used to be the second richest town of the Czech Kingdom of its time. The variety of Kutná Hora architectural monuments and its well preserved structure of the town centre reflexes its ancient fame and wealth until these days. During your walk in Kutná Hora you will visit the Gothic St. Barbara Cathedral and Italian Court – originally a Royal Mint. You will also have the possibility to admire another beautiful Gothic, Renaissance and Baroque burgher house or the unique stone well from 15th century. You also will visit one of the most interesting burial places in the world called Kostnice (Ossuary) in a small nearby village Sedlec. This chapel is decorated by more than 40 000 human bones, including e.g. a chandelier or the coat-of-arms of the noble family Schwarzenberg. Kutná Hora town has been registered a UNESCO World Heritage Site since 1995.

7) Kutná Hora – Silver Mine
Departure at 14:00, Return at 19:00, Price per person: 40 Euro
Take a walk around Kutná Hora and discover the history of the town that was called the jewel and the treasury of the country, town whose wealth elevated the Czech Kingdom.
You will visit the Czech Museum of Silver. The tour introduces the whole process the silver ore had to undergo until a silver coin was struck. Includes visit of the original medieval silver mine, which leads directly to the historic town center. Moreover during your walk through Kutná Hora you will admire the beautiful Gothic, Renaissance and Baroque burgher houses and St. Barbora's Cathedral – one of the most famous Gothic cathedrals in Central Europe (a UNESCO World Heritage Site). St. Barbora is the patron of miners, which was highly appropriate for the town.
(People suffering from claustrophobia, cardiac and respiratory diseases, pregnant women and people with reduced mobility are no allowed to visit the mine).

8) Vltava River Cruise with Guide
Departure at 15:30, Return at 17:00, Price per person: 15 Euro
Would you like to see Prague from a different perspective? A cruise on the Vltava River is among the favourite pastimes of Prague visitors. We will drive you to the pier by bus, equipped by a modern headphones system, and then you will spend one hour aboard the cruise ship. You will have amazing views of the most impressive monuments of the historical centre: the Prague Castle panorama, Charles Bridge, the romantic Kampa Island, the picturesque roofs and charming spires of the Lesser Town and the Old Town.

Concert of the Prague Philharmonic Orchestra

Prague Dvořák Hall, Rudolfinum
Thursday, 23 August, 2012 from 19:00 - 20:00
Price: Free of charge

Gala Dinner

Ceremony and Column Hall, Rudolfinum
Thursday, 23 August, 2012 at 20:00
Price per person: 80 Euro

63rd Annual Meeting Concert

Rudolfinum, Prague, August 23rd 19:00

W.A. Mozart	Ouverture to the opera Don Giovanni, K.V. 527
J.V.H. Voříšek	Symphony in D
A. Dvořák	Mazurek for violin and orchestra, op. 49
B. Smetana	Sarka (Symphonic poem from the cycle My Country) op. 112/3

Prague Philharmonia Orchestra

Ladislav Cigler, *conductor*

Jakub Fišer, *violin*

Every now and then a talent comes along of this grandeur. In my opinion the Slavonic dances are a masterpiece which will undoubtedly travel throughout the world. Heavenly Providence rests and flows through this music. There is no trace of forced artificiality. In my opinion whoever finds a jewel in the gravel of the road is obliged to report it. And I cannot restrain myself from declaring the excellence of this work.

These words were written by a German critique Louis Ehlert in 1878, about the yet-unknown composer Antonín Dvořák (1841 -1904) and his Slavonic dances. Indeed Dvořák's music will be an important part of our concert. As well, the other pieces to be heard during the concert this evening are true jewels full of what Ehlert called "Heavenly Providence".

The Ouverture to the opera Don Giovanni was written by Wolfgang Amadeus Mozart (1756-1751) while staying with his friends Mr. and Mrs. Dusek in Prague. The tradition has it that the Ouverture to this "Queen of operas" was written at the last moment before its first-ever performance and had its world premier on October 29th 1787. Don Giovanni met with an ecstatic success with the Prague audience, as did the Marriage of Figaro, which failed pathetically in the Mozart's hometown of Vienna. The contemporary press wrote about the success of Don Giovanni: Experts and musical artists equivocally claim that Prague has not seen an opera production equal to Don Giovanni. The ouverture to the opera about a famous philanderer opens with a dramatic passage from the concluding act, when the "stone guest", a statue of

the Comtur killed by Giovanni in a duel, comes to bid Giovanni to change his life and repent. The tense atmosphere of the opening bars fluently changes into brisk and playful music so as to reflect the subtitle of the work – drama giocoso – promising that the serious is to be interwoven with the comic.

Václav Jan Hugo Voříšek (1791–1825) was born in Vamberk (East Bohemia) the same year as Prague received the premier of the final opera by Mozart, La clemenza di Tito. (Mozart died in Vienna later the same year.) Voříšek showed a great talent from an early age and started prodigal concerting at the age of 9. However, this did not help to sufficiently earn a living as a professional musician. Failing to secure his future in Prague, Voříšek left for Vienna at the age of 22, which afforded him the chance to interact with Beethoven and Schubert. His dreams of a career in music became reality ten years later in 1824 when he accepted an appointment as organist at an imperial court. Voříšek died of tuberculosis just one year later in 1825. Symphony in D major (finished in January 1823) is one of the few evidences of his exceptional talent and musical creativity.

Following the great artistic and commercial success of the Slavonic dances, Berlin-based publisher Fritz Simrock commissioned Antonin Dvořák to create the Mazurek op. 49. The original request was for a short piece for violin with piano accompaniment in the style of Slavonic dances. The Mazurek, which was dedicated to Spanish virtuoso Pablo de Sarasate, was published in 1879. The orchestrated version of the piece was written by Dvořák himself simultaneously with the piano version. The premier of the piece was on Christmas day of 1879.

The Moldau has to be the most famous part of the My Country cycle of Bedřich Smetana (1824 -1884). Sarka is undoubtedly the most dramatic of them all. A tale from the Czech myths narrates an episode of a struggle of women against men in which Ctirad – one of the men's chieftains who is most hated by the womenfolk – finds his end in the fiendish trap of an angelic appearance. The composition commences with the narration of an infuriated girl who, because the infidelity of her lover, swears a perpetual vengeance to the entire male gender. These are the composer's own words describing the story portrayed in the music. Ctirad and his knights are marching in the distance to abase and punish the women, when they are attracted by wailing – though a trickery – of a girl bound to a tree. At the sight of her Ctirad finds himself taken aback by her beauty, falls in love with her and releases her. She then uses a potion to entertain Ctirad and his knights until they become inebriated and fall asleep. At the signal of a horn, the girls hidden at a distance answer and spring out to start a bloodstained scene. This is the terror of universal slaughtering, the fury of Sarka's satiated revenge, which is the end of composition. Smetana first mentions his intention to compose Sarka in January 1875, about one month after finishing the composition of Moldau. It was about three months after completely losing his hearing. The score was completed on February 20th 1875.

PRAGUE PHILHARMONIA ORCHESTRA

The Prague Philharmonia Orchestra was established in 1994 upon the initiative of the conductor Jiří Bělohlávek as a chamber ensemble made up of young music school graduates playing with true engagement and passion. Following 1996, when it became one of the first public non-profit organizations in the country, it quickly became one of the top ranked orchestras in Czech Republic and gradually has built up renown abroad. Since 2008 the Prague Philharmonia Orchestra performs under musical directorship of the young Czech conductor Jakub Hrůša. The Prague Philharmonia Orchestra is based on the Viennese Classicism type of orchestra; the compositions of this period also form cornerstone of its repertoire.

The Prague Philharmonia Orchestra is dedicated to talented young musicians in the Prague Philharmonia Orchestra Orchestral Academy. It was the first orchestra in the Czech Republic to start organizing special concerts for children.

The Prague Philharmonia Orchestra performs at prestigious world concert halls, regularly appears at international music festivals and collaborates with world-renowned conductors and soloists, including Vladimir Ashkenazy, Emmanuel Villaume, Jefim Bronfman, Mischa Maisky, Magdalena Kožená, Anna Netrebko, Rolando Villazón, Placido Domingo and others. The orchestra has to date recorded more than 60 compact discs for labels of such renown as Deutsche Grammophon, Decca, Supraphon, etc. The most recent Prague Philharmonia Orchestra albums include a live recording of Bedřich Smetana's My Country from the opening concert of the 2010 Prague Spring Festival; the album titled Libera, on which the orchestra

accompanies the Korean soprano Sumi Jo; and, in chamber formation, the CD featuring the violinist Ivan Ženatý performing works by František Benda.

The Prague Philharmonia Orchestra has many interesting projects lined up for the 2012–2013 season, including concerts with the mezzo-soprano Elina Garanča in Prague and Paris, a special benefit performance with the clarinet soloist Ludmila Peterková, a subscription concert with the cellist Mischa Maisky, conducted by Milan Turković, as well as many more events.

Oral presentation program

Monday, 20 August 2012 - Morning

Plenary

Room : Meridian

Chaired by: Marc Koper

09:40 to 10:40

Jens K. Norskov (SUNCAT Center for Interface Science and Catalysis, SLAC National Accelerator Laboratory, Menlo Park, USA)

(Photo-)electro-catalytic fuel production

09:40 to 11:00

Coffee Break

Symposium 1: Recent Advances in Electrochemical Instrumentation and Electrodes

Room : Kepler

Chaired by: Kate Meadows

11:00 to 11:20 **Invited**

Frank-Michael Matysik (University of Regensburg, Institute of Analytical Chemistry, Regensburg, Germany), Peter Palatzky, Rebekka Scholz, Marija Cindric

Electrochemically assisted injection: a novel instrumental approach for the hyphenation of electrochemistry - capillary electrophoresis - mass spectrometry

11:20 to 11:40

Dmitry Momotenko (Ecole polytechnique federale de Lausanne, Laboratoire d'Electrochimie Physique et Analytique, Lausanne, Switzerland)

Microfluidic push-pull probe for scanning electrochemical microscopy – a multipurpose tool for chemical/ electrochemical imaging

11:40 to 12:20 **Keynote**

Paul Bohn (Department of Chemical and Biomolecular Engineering and Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, USA), Larry Gibson, Nicholas Contento, Sean Branagan

Hydrodynamic Voltammetry at Annular Nanoband Electrodes Embedded in Nanocapillary Array Membranes

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Taek Dong Chung

11:20 to 12:00 **Keynote**

Scott Calabrese Barton (Department of Chemical Engineering & Materials Science, Michigan State University, East Lansing, USA), Hao Wen

Multiscale Porous Electrodes for Bioelectrocatalysis

12:00 to 12:20 **Katsumi Niki Prize for Bioelectrochemistry**

Wolfgang Schuhmann (Ruhr-Universität Bochum, Analytische Chemie - Elektroanalytik & Sensorik, Bochum, Germany)

A short journey through bioelectrochemistry. Electron-transfer pathways between enzymes and electrodes as a prerequisite for the design of biosensors and biofuel cells

Symposium 4b: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Elzbieta Frackowiak

11:20 to 12:00 **Keynote**

Rüdiger Kötz (Paul Scherrer Institut, Villigen, Switzerland), Moritz Maximilian Hantel, Daniel Weingarth, Annette Foelske-Schmitz

From Graphite to Graphene - Novel Electrode Materials for Supercapacitors

12:00 to 12:20

Jakub Reiter (MEET Battery Research Centre, Institute of Physical Chemistry, University of Muenster, Muenster, Germany), Elie Paillard, Stefano Passerini, Martin Winter

Electrochemical and physicochemical properties of new PYR12O1 ionic liquids

12:20 to 12:40

Joel Gaubicher (Institut des Matériaux Jean Rouxel, IMN UMR-CNRS 6502, Université de Nantes, Nantes, France), Lenaic Madec, Audrey Bouvrée, Philippe Blanchard, Jean-Claude Badot, Bernard Lestriez, Charles Cougnon, Thierry Brousse, Dominique Guyomard

New concept and electrochemistry of in situ non-covalent immobilization of redox molecules for energy storage applications

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Sanjeev Mukerjee, Masahiro Watanabe

11:20 to 12:00 **Keynote**

Masahiro Watanabe (Fuel Cell Nanomaterials Center, University of Yamanashi, Kofu, Japan)

Development of Pt and Pt-Alloy Electrocatalysts for the Next Generation PEFCs

12:00 to 12:20

Alejandro Oyarce (Applied Electrochemistry, KTH Royal Institute of Technology, Stockholm, Sweden), Carlos Gonzales, Carina Lagergren, Göran Lindbergh

The performance of a direct-sorbitol PEMFC at different temperatures

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Room : Taurus

Chaired by: Kurt Hebert

11:00 to 11:40 **Keynote**

Jörg Weissmüller (Institut für Werkstoffphysik und Technologie, Technische Universität Hamburg-Harburg and Arbeitsgruppe Hybride Materialsysteme Institut für Werkstoffforschung, Werkstoffmechanik Helmholtz-Zentrum, Hamburg, Germany)

Novel Functional Materials Based on Nanoporous Metals

11:40 to 12:20 **Keynote**

Yi Ding (School of Chemistry and Chemical Engineering, Shandong University, Jinan, China)

Nanoporous Gold Leaf Based Electrodes for Advanced Energy Technologies

Symposium 8: Electroactive Polymeric and Inorganic Materials

Room : Leo

Chaired by: Robert Hillman, Magdalena Skompska

11:00 to 11:20

Daniel Bélanger (Département de Chimie, Université du Québec à Montréal, Montréal, Canada), Galyna Shul, Carlos Alberto Castro Ruiz, Dominic Rochefort, Daniel Bélanger

Electrochemical Modification of Surfaces with the Diazonium Chemistry

11:20 to 11:40

Evgenia Dmitrieva (Department of Electrochemistry and Conducting Polymers, Leibniz Institute for Solid State and Materials Research, Dresden, Germany), Andrea Kellenberger, Lothar Dunsch

Charged states at phenazine units in polyaniline: In situ ESR/UV-vis-NIR and ATR-FTIR spectroelectrochemistry

11:40 to 12:00

Csaba Visy (Department of Physical Chemistry & Materials Science, University of Szeged, Szeged, Hungary), Peter S. Tóth, Emese Peintler-Kriván

Contribution of the Various Charge Carriers to the Development of the Conducting State of Conjugated Polymers: Identification and Interpretation

12:00 to 12:20

György Inzelt (Department of Physical Chemistry, Institute of Chemistry, Eötvös Loránd University, Budapest, Hungary), Balázs B. Berkes

Nanogravimetric Study on the Adsorption and Electropolymerization of Indole and Indole Derivatives and on the Redox Behavior of Polyindoles

12:20 to 12:40

Alexander Nekrasov (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia), Oxana Gribkova, Olga Omelchenko, Victor Ivanov, Anatoly Vannikov

Peculiarities of Spectroelectrochemical Behavior of Interpolymer Complexes of Polyaniline with Different Polymeric Sulfonic Acids

Symposium 10: Electrochemical Process Engineering and Technology

Room : Virgo

Chaired by: Gerardine Botte, Ann Cornell

11:00 to 11:20

Vitaly Bychkov (Department of Physics, Umea, Sweden), Piotr Matyba, Olexey Yukhimenko, Mikhail Modestov, Ludvig Edman

Speed-up of Electrochemical Doping Process in Organic Semiconductors through Front Instability

11:20 to 11:40

Yann Bultel (Grenoble Institute of Technology, Saint Martin d'Heres, France)

Modeling of Gradual Internal Reforming Process over Ni-YSZ SOFC Anode with a Catalytic Layer: Effect of the Steam to Methane Ratio

11:40 to 12:00

Lucía Fernández Macía (Research Group Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Brussels, Belgium), María Petrova, Thomas Doneux, Rik Pintelon, Annick Hubin

Random Noise for a Reliable Modeling of Electrochemical Reactions. Study of a Redox Reaction on a Self-Assembled Monolayer Modified Electrode

12:00 to 12:20

Gerd Mutschke (Inst. Fluid Mech., TU Dresden, Dresden, Germany), Kristina Tschulik, Margitta Uhlemann, Andreas Bund, Jochen Froehlich

On the Role of Electrolyte Convection for the Magnetic Structuring of Metal Deposits

Symposium 12: Photoelectrochemistry, Electrochromism and Electrochemiluminescence

Room : Aquarius

Chaired by: Lothar Dunsch

11:00 to 11:40 **Keynote**

Paul Low (Department of Chemistry, Durham University, Durham, United Kingdom)

Spectroelectrochemistry: A valuable tool in a synthetic chemist's toolbox

11:40 to 12:00

Jane Falgenhauer (Justus-Liebig-University Giessen, Institute of Applied Physics, Giessen, Germany), Hidetoshi Miura, Derck Schlettwein

Electrochemical and Spectroelectrochemical Characterization of New Indoline Dyes for the Sensitization of Porous ZnO in Dye-Sensitized Solar Cells

12:00 to 12:20

Frantisek Hartl (University of Reading, Reading, United Kingdom), Nur Rizalman, Russell Balster

π-Dimerization of Radical Cations of Hepta-, Penta- and Tetrathienoacenes: Substituent and Counterion Effects

12:20 to 12:40

Qiang Zeng (Department of Chemistry, University of Reading, Reading, United Kingdom), Frantisek Hartl, Antonin Vlcek Jr

Electrochemical Reductive Deprotonation of an Imidazole Ligands in Rhenium(I) Carbonyl α-Diimine Complexes

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Christian Amatore, Serge Lemay

11:00 to 11:40 **Keynote**

Masayoshi Watanabe (Department of Chemistry & Biotechnology, Yokohama National University, Yokohama, Japan)

Diffusion and Migration in Ionic Liquids: A Search for Super-diffusing Li+ and H+

11:40 to 12:00 **Invited**

Oleg Borodin (Army Research Laboratory, Adelphi, USA), Jenel Vatamanu, Lidan Xing, Dmitry Bedrov, Grant Smith

Insight into Ionic Liquid and Liquid Electrolyte Behavior at Electroactive Interfaces

12:00 to 12:20 **Invited**

Maxim Fedorov (Nanoscience Division, Department of Physics, Strathclyde University, Glasgow, United Kingdom)

Molecular Mechanisms of Electrolytes Interactions with Carbon Nanomaterials: from Fundamentals to Applications

12:20 to 12:40 **Invited**

Susan Perkin (Department of Chemistry, University College London, London, United Kingdom)

Self-Assembly and Friction in Confined Ionic Liquid Electrolytes

Symposium 14: Electrochemistry at Liquid-Liquid Interfaces

Room : Quadrant

Chaired by: Robert Dryfe

11:00 to 11:40 **Keynote**

Hubert H. Girault (Laboratoire d'Electrochimie Physique et Analytique, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland), Peiyu Ge, Astrid Olaya, Pekka Peljo, Micheal Scanlon, Kathryn Toghill, Patrick Voyame

Water Splitting and CO_2 Reduction at Soft Interfaces

11:40 to 12:00

Micheal D. Scanlon (Laboratoire d'Electrochimie Physique et Analytique, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland), Peiyu Ge, Hubert H. Girault

H_2 evolution across nano-Schottky junctions at carbon supported MoS_2 catalysts in biphasic liquid systems

12:00 to 12:20

Tom Stockmann (Chemistry Department, The University of Western Ontario, London, Canada), Anne-Marie Montgomery, J. Clara Wren, Zhifeng Ding

Electrochemical assessment of waterlionic liquid biphasic systems towards nuclear waste reclamation

12:20 to 12:40 **Invited**

Vladimír Marecek (J. Heyrovský Institute of Physical Chemistry AS CR, Czech Republic), Karel Stulík, Karel Holub

Formation of Ion Pairs at a Liquid|Liquid Interface

Symposium 15: General Session

Room : Stella

Chaired by: Elisabet Ahlberg

11:00 to 11:20

Aleix Comas-Vives (Institute for Electrochemistry, Ulm, Germany), Timo Jacob

Understanding Electrode/Electrolyte Interfaces

11:20 to 11:40

Alexander Bondarenko (Center for Electrochemical Sciences, Ruhr-Universität Bochum, Bochum, Germany), Minghua Huang, Artjom Maljusch, John Henry, Wolfgang Schuhmann, Alexander Bondarenko

Electrode | Electrolyte Interface Characterisation during Intercalation of Cu into Te

11:40 to 12:00

Taro Uchida (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Takeshi Hasegawa, Masatoshi Osawa

Probing the Electrochemical Interface by ATR-SEIRAS Using Polarized Radiation

12:00 to 12:20

Tetsuya Kida (Department of Energy and Material Sciences, Kyushu University, Kasuga, Japan), Satoshi Suehiro, Masayoshi Yuasa, Tooru Tanaka, Kengo Shimanoe

Synthesis of Cu_2ZnSnS_4 nanocrystals and fabrication of thin films for photovoltaic application

Monday, 20 August 2012 - Afternoon

Symposium 1: Recent Advances in Electrochemical Instrumentation and Electrodes

Room : Kepler

Chaired by: Alan Bond, Toj Chee Seng

14:20 to 14:40 **Invited**

William Heineman (University of Cincinnati, Department of Chemistry, Cincinnati, USA), Carl Seliskar, Eme Abu, Sam Bryan

Spectroelectrochemistry as a Strategy for Improving Selectivity of Sensors for Environmental Applications

14:40 to 15:00 **Invited**

Fabien Miomandre (ENS Cachan, Cachan, France), Robert Pansu, Pierre Audebert, Jean-Frederic Audibert, Pascal Martin, Jean-Christophe Lacroix

Coupling electrochemistry with fluorescence microscopy : insights into electrofluorescence properties and plasmon modulation

15:00 to 15:20

Fernando Moraes (University of São Paulo, São Carlos, Brazil), Ivana Cesarino, Renato Lima, Emanuel Carrilho, Sergio Machado

Electrochemical Detection of Serotonin Using a Microfluidic Device Integrating Vertically Aligned CNTs

15:20 to 15:40

Soma Vesztergom (Laboratory of Electrochemistry & Electroanalytical Chemistry, Eötvös Loránd University of Budapest, Budapest, Hungary), Gyözö, G. Láng

Dual Cyclic Voltammetry with RRDEs: Creating 3D Maps of Electrode Reaction Products

15:40 to 16:20 **Keynote**

Eric Bakker (University of Geneva, Geneva, Switzerland)

New Directions for Ion-Selective Electrodes

16:20 to 16:40 Coffee Break

16:40 to 17:00 **Invited**

Ching-Chou Wu (Institute of Bio-Industrial Mechatronics Engineering, National Chung Hsing University, Taichung, Taiwan), Yu-Fen Kuo, Shin-Yu Fu

Cell-Based Chips for Measurement of Cellular Respiratory Activity, Acidification Rate and Oxidative Stress

17:00 to 17:20

Tomokazu Matsue (Advanced Institute of Materials Research, Tohoku University, Sendai, Japan), Kosuke Ino, Taku Nishijou, Yasufumi Takahashi, Hitoshi Shiku

Local Redox Cycling-Based Electrochemical Device for Characterization of 3D Culture Cells

17:20 to 17:40

Yueh-Yuan Fang (Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan), Yi-Cheng Hsieh, Chii-Wann Lin

Continuous monitoring oxygen level of stem cell culture in 96-well plate

17:40 to 18:00

Alexander Kuhn (University of Bordeaux, Pessac, France), Matthias Heim, Laurent Bouffier, Veronika Urbanova, Karel Vytras, Stephane Reculusa, Serge Ravaine, Blaise Yvert

Improving the performance of microelectrode arrays for neuronal recording

18:00 to 18:20

Damien Marchal (Laboratoire d Electrochimie Moléculaire, Université Paris Diderot, UMR CNRS 7591, Paris, France), Mélanie Moreau, Benoit Limoges

Real-time Monitoring of DNA Amplification in a Smart Electrochemical Microplate

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Scott Calabrese Barton, Marcin Opallo

14:20 to 14:40 **Invited**

Sergey Shleev (Biomedical Sciences, Faculty of Health and Society, Malmö University, Malmö, Sweden), Viktor Andoralov, Magnus Falk, Markus Granmo, Dmitry Suyatin, Jens Schouenborg, Javier Sotres, Roland Ludwig, Olga Morozova, Zoltan Blum

High-performance, size-optimised, nanobiostructure-based biofuel cell operating in rat brain

14:40 to 15:00

Sidney Aquino Neto (University of Sao Paulo, Ribeirao Preto, Brazil), Emily L. Suda, Shuai Xu, Matthew T. Meredith, Adalgisa R. De Andrade, Shelley D. Minteer

Preparation and electrochemical characterization of direct electron transfer-based bioanodes for ethanol biofuel cell

15:00 to 15:20

Ernesto Gonzalez (Universidade de São Paulo, São Carlos, Brazil), Gustavo Ciniciato, Carolin Lau, Plamen Atanassov

Bio-inks for Printable Paper Based Biofuel Cells

15:20 to 15:40

Marcos Pita (Instituto de Catálisis y Petroleoquímica, CSIC, Madrid, Spain), Cristina Gutierrez-Sanchez, Sergey Shleev, Antonio L. De Lacey

Improving the Direct Electron Transfer Efficiency in Laccase Electrodes for Biofuel Cell Cathodic Reactions

15:40 to 16:00

Isao Shitanda (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Shuji Ogawa, Masayuki Itagaki

3-D Electrochemical Impedance Spectroscopy Study on Open-air Type Biofuel Cell using Enzyme Immobilized Porous Carbon Fiber Sheet Electrode

16:00 to 16:20 **Invited**

Frank Crespilho (Instituto de Química de São Carlos (IQSC), Universidade de São Paulo, Sao Carlos, Brazil)

Flexible Carbon Fiber Electrodes for Implantable Glucose/O_2 Bio-fuel Cell in Rat Intravenous

16:20 to 16:40

Coffee Break

16:40 to 17:00

Alan Le Goff (Departement de Chimie Moleculaire UMR CNRS 5250, Grenoble, France), Karine Gorgy, Michael Holzinger, Serge Cosnier

Carbon nanotube electrodes functionalized with redox-active molecules for bioelectrochemical applications

17:00 to 17:20

Krzysztof Stolarczyk (Faculty of Chemistry, Warsaw University, Warsaw, Poland), Dominka Lyp, Kamila Zelechowska, Jan F. Biernat, Jerzy Rogalski, Renata Bilewicz

Arylated Carbon Nanotubes for Biobatteries and Biofuel Cells

17:20 to 17:40

Laith Hussein (University of Freiburg, Freiburg, Germany), Gerald Urban, Fethi Olcaytug

Enzyme-Based Carbon Nanostructured Electrodes for Biofuel Cell Applications

17:40 to 18:00

Oleg Voronin (M.V. Lomonosov Moscow State University, Faculty of Chemistry, Moscow, Russia)

Hydrogenase-based Fuel Cell Combined with Microbial Bioreactor for Conversion of Cellulose Containing Wastes into Electricity

18:00 to 18:20

Alexandre Ciaccafava (Bioénergétique et Ingéniérie des protéines CNRS, Marseille , France), Anne De Poulpiquet, Sophie Lecomte, Marc Baaden, Marie Thérèse Giudici-Orticoni, Elisabeth Lojou

Dye-Functionnalized Carbon Nanotube Networks for Efficient H_2 Oxidation by An O_2- and Co-Resistant Hydrogenase

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Kristina Edstrom, Adam H. Whitehead

14:20 to 14:40 **Invited**

Michel Armand (CIC Energigune, Alava, Spain)

Batteries: Are We Promising Too Much?

14:40 to 15:20 **Keynote**

Joachim Maier (Max Planck Institute for Solid State Research, Stuttgart, Germany)

Lithium Batteries: What Are the Adjusting Screws?

15:20 to 15:40

Craig Fisher (Japan Fine Ceramics Center, Nagoya, Japan), Navaratnarajah Kuganathan, M. Saiful Islam

Surface Structures of Li_2MnSiO_4 and Their Effect on Li Ion Migration

15:40 to 16:00

Yongyao Xia (Department of Chemistry, Fudan University, Shanghai, China), Yonggang Wang

Pseudo-capacitive Profile vs. Li-intercalation in Nano-$LiFePO_4$

16:00 to 16:20

Nils Böckenfeld (MEET-Institute of Physical Chemistry, University of Münster, Münster, Germany), Stefano Passerini, Martin Winter, Andrea Balducci

The Influence of Activated Carbons on the Performance of Lithium Iron Phosphate-based Electrodes

16:20 to 16:40

Coffee Break

16:40 to 17:00

Steen Schougaard (Department of Chemistry, Université du Québec à Montréal, Montreal, Canada), David Lepage, Christophe Michot, Guoxian Liang, Michel Gauthier

The Use of Conductive Polymers in $LiFePO_4$ Composite Positive Electrodes for Lithium-ion Batteries

17:00 to 17:20

Serife Kaymaksiz (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW), Ulm, Germany), Mario Wachtler, Margret Wohlfahrt-Mehrens

Application of Stationary and HydrodynamicVoltammetry Techniques to Investigate Redox Shuttle Additives for Overcharge Protection of Li-ion Batteries

17:20 to 17:40

Masaki Yamagata (Kansai University, Suita, Japan), Nobuhide Nishigaki, Satoshi Nishishita, Yukiko Matsui, Toshinori Sugimoto, Manabu Kikuta, Tetsuya Higashizaki, Michiyuki Kono, Masashi Ishikawa

Electrochemical Behavior of Several Graphite Anodes in Bis(fluorosulfonyl)imide-based Ionic Liquids and Their Structural Aspects of Electrode/Electrolyte Interfaces

17:40 to 18:00

Yoon-Sok Kang (SAIT (Samsung Advanced Institute of Technology), Yongin-si, Korea), Junyoung Mun, Min Sik Park

Novel additives for protection of high voltage cathode

18:00 to 18:20

Jung-Yi Yu (Energy Lab. Corporate R&D Center, Samsung Sdi Co., Ltd., Yongin, Korea), Jung-Yi Yu, Woocheol Shin, Sangil Han, Hironari Takase, Yoonchang Kim

Recent Development of High Voltage Electrolytes for Lithium Ion Batteries (LIBs) in xEV applications

18:20 to 18:40

Andreas Wohlfarth (Max Planck Institute for Solid State Research, Stuttgart, Germany), Klaus-Dieter Kreuer, Jan Melchior, Joachim Maier

Single Alkaline (Li+, Na+) Ion Conducting Polyelectrolytes for Battery Applications

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Enrique Herrero, Kaspar Andreas Friedrich

14:20 to 14:40

Radoslav Adzic (Brookhaven National Laboratory, Upton, USA), Jia Wang, Miomir Vukmirovic, Kotaro Sasaki, Stoyan Bliznakov, Yun Cai, Kuanping Gong, Kurian Kuttiyiel, Yu Zhang, Lijun Yang

Platinum Monolayer Electrocatalysts for the Oxygen Reduction Reaction: Designing the Supporting Nanocores for Improved Performance

14:40 to 15:00

Ifan Stephens (Department of Physics, Technical University of Denmark, Kgs. Lyngby, Denmark), Tobias Johansson, David McCarthy, Patricia Hernandez-Fernandez, Maria Escudero-Escribano, Ulrik Grønbjerg, Anders Jepsen, Anders Nierhoff, Francisco Perez-Alonso, Paolo Malacrida, Alexander Bondarenko, Lone Bech, Daniel Friebel, Jakob Schiøtz, Jane Nielsen, Jan Rossmeisl, Anders Nilsson, Ib Chorkendorff

What determines the oxygen reduction activity of alloys of Pt and early transition metals?

15:00 to 15:20

Enrique Herrero (Instituto de Electroquímica, Universidad de Alicante, Alicante, Spain), Carlos Busó-Rogero, Francisco J. Vidal-Iglesias, José Solla-Gullón

Surface and pH Effects in Ethanol Oxidation on Platinum Nanoparticles

15:20 to 15:40

Diana Carolina Galeano Nuñez (Department of Heterogeneous Catalysis, Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, Germany), Josef C. Meier, Karl J.J. Mayrhofer, Volker Peinecke, Ferdi Schüth

Activity and Stability of Nanostructured Catalysts for Fuel Cells

15:40 to 16:00

Vladimir Guterman (Department of Chemistry, Southern Federal University, Rostov-on-Don, Russia), Tatiana Lastovina, Elena Pakhomova, Andrey Pakharev

Supported Electrocatalysts Based on M-core – Pt-shell and Hollow Type Nanoparticles

16:00 to 16:20

Dae Jong You (Energy Lab., Samsung Advanced Institute of Technology, Samsung Electronics Co. Ltd., Yongin-Si, Korea), Seon-ah Jin, Kang Hee Lee

PdP Overgrowth on Carbon-supported PdCoP Electrocatalyst for Oxygen Reduction Reaction in PEMFC

16:20 to 16:40

Coffee Break

16:40 to 17:00

Alexander Bauder (Institute of Technical Thermodynamics, German Aerospace Center, Stuttgart, Germany), Jan Haußmann, Henning Markötter, Robert Alink, Joachim Scholta, Kaspar Andreas Friedrich

Influence of the MPL on PEM fuel cell performance

17:00 to 17:20

Kaspar Andreas Friedrich (Institute of Technical Thermodynamics, German Aerospace Center, Stuttgart, Germany), Daniel Garcia Sanchez

Oscillations of Polymer Electrolyte Fuel Cells and the associated Water Management

17:20 to 17:40
Nada Zamel (Fraunhofer Institute for Solar Energy, Freiburg, Germany), Dietmar Gerteisen, Arjun Bhattarai
Spatially Resolved Electrochemical Impedance Spectroscopy Measurements for PEM Fuel Cells – Effect of Flow Rate on Water Transport

17:40 to 18:00
Samira Siahrostami (Department of Physics, Lyngby, Denmark)
Tandem Cathode in Proton Exchange Membrane Fuel Cell

18:00 to 18:20
Josef Schefold (European Institute for Energy Research (EIFER), Karlsruhe, Germany), Annabelle Brisse
Long-Term Reversible Operation of Solid Oxide Fuel Cells for Steam Electrolysis

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Room : Taurus

Chaired by: Patrik Schmuki

14:20 to 15:00 **Keynote**
Peter Strasser (Department of Chemistry, Chemical Engineering Division, Berlin, Germany)
Nanostructured electrocatalysts based on dealloyed Pt bimetallic alloys

15:00 to 15:20
Khaled Soliman (Institute of Electrochemistry, Ulm, Germany)
Electrosynthesis of Facet-Controlled Iridium Nanoparticles and their Electrocatalytic Activity towards Carbon Monoxide Adlayer Oxidation

15:20 to 15:40
Yan-Yan Song (School of Sciences, Northeastern University, Shenyang, China)
Pt Nanoparticle Functionalized TiO_2 Nanotubes: A Refreshable Platform for Methanol Electrooxidation and Nonenzymatic Glucose Detection

15:40 to 16:00 **Invited**
Stanko Brankovic (University of Houston, Houston, USA), Jinnie George, Ray Carpenter, Dmitri Litvinov, Shereen Elhalawaty
Electrodeposited Ferromagnetic Metal/Metal Oxide Materials for Magnetic Field Sensor Application

16:00 to 16:20
Giancarlo Pigozzi (Empa Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland), Debashis Mukherji, Patrik Schmutz
Electrochemical Selective Phase Dissolution for the Synthesis of Intermetallic Nanoparticles with Core-Shell Structure

16:20 to 16:40 Coffee Break

16:40 to 17:00
Mary Ryan (Department of Materials, Imperial College London, London, United Kingdom), Julia Lyubina, Ullrich Hannemann, Lesley Cohen
Electrochemical Processing of Novel Composite Materials for Energy Efficient Magnetic Cooling

17:00 to 17:20
Lorena Monzon (Department of Physics, Trinity College Dublin, Dublin, Ireland), Louise Klodt, Karsten Rode, M. Venkatesan, J.M.D. Coey
Electrosynthesised Magnetic and Non-magnetic Microcrystals

17:20 to 17:40 **Invited**
Giovanni Zangari (University of Virginia, Department of Materials Science and Engineering, Charlottesville, USA), Lok-kun Tsui
Photoelectrochemistry of TiO_2 nanotubes prepared under various anodization conditions and modified by Cu_2O or Fe_2O_3

17:40 to 18:00

Min Yang (School of Chemical Engineering and Technology, Harbin Institute of Technology, Harbin, China), Kiyoung Lee, Patrik Schmuki

Nb-doped TiO_2 Nanotubes for an Enhanced Efficiency in Photoresponse and Dye-Sensitized Solar Cells

18:00 to 18:20

Ning Liu (Department of Materials Science and Engineering, University of Erlangen-Nuremberg, D-91058 Erlangen, Germany), Indhumati Paramasivam, Min Yang, Patrik Schmuki

Some Critical Factors for Photocatalysis and Electrochemically Assisted Photocatalysis on Self-organized TiO_2 Nanotubes

Symposium 8: Electroactive Polymeric and Inorganic Materials

Room : Leo

Chaired by: Johan Bobacka, Daniel Mandler

14:20 to 14:40 **Invited**

Robert Hillman (Department of Chemistry, University of Leicester, Leicester, United Kingdom), Christopher Zaleski, Karl Ryder

Novel Mass Transfer Effects Accompanying Redox Switching of Poly(3,4,-ethylenedioxythiophene) Films in Deep Eutectic Solvents

14:40 to 15:00

Jorge Correia (CQB, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal), Catarina Gustavo

Mass Transfer Processes in the Redox Conversion of PEDOT-PSS

15:00 to 15:20

Mikhail Vorotyntsev (ICMUB, UMR 6302, Universite de Bourgogne, Dijon, France), Dmitry Konev

Chronoamperometric *in situ* Measurement of the Specific Conductivity of a Thin Film on the Disc Electrode Surface

15:20 to 15:40

Mie Lillethorup (Department of Chemistry, Aarhus University, Aarhus C, Denmark)

Investigating Charge Transfer Processes in Ferrocene-containing Polymer Brushes

15:40 to 16:00 **Invited**

Kim McKelvey (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Anisha Patel, Patrick Unwin

Scanning Electrochemical Cell Microscopy: Nanoscale Polymer Synthesis and Patterning

16:00 to 16:20

Jacek Gasiorowski (Department of Physical Chemistry, Linz Institute for Organic Solar Cells (LIOS), Johannes Kepler University, Linz, Austria), Andrei Ionut Mardare, Helmut Neugebauer, Niyazi Serdar Sariciftci, Achim Walter Hassel

High throughput screening of small amounts of organic semiconductors using a scanning droplet cell

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Johan Bobacka (Åbo Akademi University, Process Chemistry Centre, Laboratory of Analytical Chemistry, Turku / Åbo, Finland), Cristina Dumitriu, Zekra Mousavi, Rose-Marie Latonen, Ioana Demetrescu

Electrochemical Characteristics of Poly(3,4-ethylenedioxythiophene)-Fullerene Composite Electrodes

17:00 to 17:20

James Cox (Miami University, Oxford, USA), Beata Mehdi, Iwona Rutkowska, Pawel J. Kulesza

Electrocatalysis at Dispersed, Nanoscale Domains in Organically Modified Silica Films

17:20 to 17:40

Pawel J. Kulesza (Department of Chemistry, University of Warsaw, Warsaw, Poland), Sylwia Zoladek, Katarzyna Skorupska, Iwona A. Rutkowska, James A. Cox

Development of Functionalized Conducting Polymer or Metal Oxide Linked Polyoxometallate-Modified Gold Nanoparticles

17:40 to 18:00

Leonid Pugolovkin (Department of Chemistry, Moscow State University, Moscow, Russia), Veronika Laurinavichute, Alexander Simonov, Olga Cherstiouk, Alexander Khokhlov, Marina Borzenko, Galina Tsirlina

The Effect of Deposition Mode on the Growth of Electrochromic Oxotungstate Films from Peroxide-free Acidic Solutions

18:00 to 18:20

Carol Crean (Department of Chemistry, Guildford, United Kingdom)

Conducting Polymer–Noble Metal Nanoparticle Composites from Ionic Liquids

Symposium 10: Electrochemical Process Engineering and Technology

Room : Virgo

Chaired by: Paul Kenis, Francois Lapicque

14:20 to 15:00 **Keynote**

Masatsugu Morimitsu (Department of Environmental Systems Science, Doshisha University, Kyotanabe, Japan)

Preparation, Characterization, and Performance of Amorphous Oxide Coated Titanium Anodes

15:00 to 15:20

Sascha Mühlenhoff (TU Dresden, Institute of Fluidmechanics Chair of Magnetofluiddynamics, Dresden, Germany), Xuegeng Yang, Stefan Odenbach, Kerstin Eckert

Magnetohydrodynamic convection during Cu-electrodeposition in a magnetic gradient field

15:20 to 15:40

Karl Ryder (Department of Chemistry, University of Leicester, Leicester, United Kingdom), Matthew Appleton, Saima Saleem, Andrew Abbott, Paul Withey, Neil DSouza

Electrolytic Surface Processing of Super-alloy Aerospace Castings using Choline chloride-based Ionic Liquids

15:40 to 16:00

Jana D. Abou Ziki (Concordia University, Montreal, Canada), Rolf Wuthrich

Improving Glass Micro-drilling By Glow Discharge Electrolysis Using Force-feedback Algorithms

16:00 to 16:20

Jhih-Jyun Yan (Department of Chemical Engineering, National Chung Hsing University, Taiwan, Taiwan), Jhih Jyun Yan, Chun-Wei Lu, Wei-Ping Dow

The Effect of Organic Acid with Organic Additive on Through Hole Filling by Cu Electroplating

16:20 to 16:40

Coffee Break

16:40 to 17:20 **Keynote**

Christos Comninellis (ISIC-EPFL, Lausanne, Switzerland)

The Importance of Catalysis in the Electrochemical Oxygen Transfer Reactions (EOTR)

17:20 to 17:40

Ann Cornell (Applied Electrochemistry, KTH Royal Institute of Technology, Stockholm, Sweden), John Gustavsson, Göran Lindbergh

In-Situ Activation of the Hydrogen Evolution Reaction by Tri-Valent Cations in Electrolytes of Near Neutral pH

17:40 to 18:00 **Invited**

Chi-Chang Hu (Department of Chemical Engineering/National Tsing Hua University, Hsin-Chu, Taiwan), Huan-Ching Hsu, Ching-Chun Huang, Kuo-Hsin Chang

Cathodic Deposition of TiO_2: Developing New and High-Efficient Deposition Solutions

18:00 to 18:20

Lokmane Abdelouahed (LRGP -CNRS, Nancy, France), Souhila Poncin, Gerard Valentin, François Lapicque

Optimal anode design of electrochemical batch cell for electrolytic reduction of hematite to iron

Symposium 12: Photoelectrochemistry, Electrochromism and Electrochemiluminescence

Room : Aquarius

Chaired by: Thierry Pauporté

14:20 to 15:00 **Keynote**

Pierre Audebert (PPSM ENS Cachan, Cachan, France)

New functional electroactive tetrazine derivatives; Electrochemistry fluorescence and applications to sensing

15:00 to 15:20 **Invited**

Frederic Barriere (Institut des Sciences Chimiques de Rennes, Université de Rennes 1, Rennes, France), Cyril Poriel, Joelle Rault-Berthelot, Damien Thirion

Experimental and Theoretical Interplay in the Development of DiSpiroFluorene-IndenoFluorene Derivatives for Blue Organic Electroluminescent Devices

15:20 to 15:40

Jeanet Conradie (Department of Chemistry, University of the Free State, Bloemfontein, South Africa)

Oxidation potential of [Rh(beta-diketonato)$(P(OPh)_3)_2$] complexes – relationships with experimental, empirical and calculated parameters

15:40 to 16:00

Michael Schmittel (Department of Chemisitry and Biology, Universität Siegen, Siegen, Germany)

Tuning the Wavelength of Electrochemiluminescence by Anodic Potential: A Design Using Non-Kekulé-Structured Iridium-Ruthenium Luminophores

16:00 to 16:20

Luiz Henrique Dall Antonia (Departamento de Quimica, Universidade Estadual de Londrina, Londrina, Brazil), Adriana Lucilha, Renata Afonso, Marcelo R. da Silva

Combustion Synthesis of Zinc Oxide Semiconductor for Photoanodes Design

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Robert Forster (School of Chemical Sciences, Glasnevin, Ireland)

High Sensitivity Disease Biomarker Detection : Electrochemiluminescent Metallopolymer:Nanoparticle Composites

17:00 to 17:20

Aranzazu Heras (Department of Chemistry, University of Burgos, Burgos, Spain), Alvaro Colina, Noelia Gonzalez

Spectroelectrochemistry at screen-printed electrodes. Analysis of neurotransmitters

17:20 to 17:40

Michal Bledowski (Photoactive Materials Group, Faculty of Chemistry and Biochemistry, Ruhr-University Bochum, Bochum, Germany), Lidong Wang, Ayyappan Ramakrishnan, Oleksiy Khavryuchenko, Radim Beránek

Photoelectrochemical water splitting at hybrid photoanodes

17:40 to 18:00

Akira Yamakata (Graduate School of Engineering, Toyota Technological Institute, Nagoya, Japan), Masaaki Yoshida, Jun Kubota, Masatoshi Osawa, Kazunari Domen

Potential-dependent Recombination Kinetics of Photogenerated Electrons in N- and P-type GaN Photoelectrodes

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Ernesto Calvo, Wolfgang Schmickler

14:20 to 14:40

Ezequiel Leiva (Departamento de Matemática y Física, Facultad de Ciencias Químicas, INFQC Universidad Nacional de Córdoba, Cordoba, Argentina), Oscar Alejandro Oviedo, Oscar Alejandro Pinto, Christian F. Negre, Marcelo Mariscal, Cristian Gabriel Sanchez

Underpotential Deposition at the Nanoscale

14:40 to 15:00

Yuwen Liu (Department of Chemistry, Wuhan University, Wuhan, China)

The Effect of the Quantum Capacitance on the Electrochemistry at Graphenes and Carbon Nanotubes

15:00 to 15:20

Celine Merlet (Laboratoire PECSA, Universite Pierre et Marie Curie, Paris, France), Mathieu Salanne, Benjamin Rotenberg, Paul Madden, Pierre-Louis Taberna, Patrice Simon, Yury Gogotsi

Understanding the Charging Mechanism of Nanoporous Carbon Electrodes from Molecular Dynamics Simulations

15:20 to 15:40

Tamás Pajkossy (Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary)

Impedance spectra of Pt(100) around the hydrogen adsorption/desorption peak

15:40 to 16:00

Izabela Kaminska (Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Manash R. Das, Yannick Coffinier, Patrice Woisel, Janusz Sobczak, Joanna Niedziolka-Jonsson, Marcin Opallo, Sabine Szunerits, Rabah Boukherroub

Graphene/tetrathiafulvalene nanocomposite switchable surfaces

16:00 to 16:20

Anthony Kucernak (Department of Chemistry, Faculty of Natural Sciences, Imperial College London, London, United Kingdom), N. Cousens, Alexei Kornyshev, M. Marinescu, C. W. Monroe, E. S. Sleightholme, Michael Urbakh

How low can you go? Ultra low voltage electrowetting

16:20 to 16:40

Coffee Break

16:40 to 17:20 **Keynote**

Frieder Mugele (Physics of Complex Fluids, University Twente, Enschede, Netherlands)

Electrowetting-controlled optofluidics: from basic principles to perfect lenses and high speed microlens arrays

17:20 to 17:40

Jorge O. Zerbino (Instituto de Fisicoquimica, INIFTA, La Plata, Argentina), Alberto Maltz, Liliana Gassa, Stefano Siboni, Claudio Della Volpe

The water double layer on gold electrodes confined and in contact with immiscible solvents

17:40 to 18:00

Nikolay Podgaynyy (Institute for Physical and Theoretical Chemistry, University of Bonn, Bonn, Germany)

Influence of Adsorbates on the Friction Force in Electrolyte

Symposium 14: Electrochemistry at Liquid-Liquid Interfaces

Room : Quadrant

Chaired by: Henrik Jensen; Zdenek Samec

14:20 to 15:00 **Keynote**

Shigeru Amemiya (Department of Chemistry, University of Pittsburgh, Pittsburgh, USA)

New Applications of Ion Transfer at Liquid/Liquid Interfaces: From Ultrasensitive Ion Analysis to Nanoscale Electrochemical Imaging

15:00 to 15:20 **Invited**

Yuanhua Shao (College of Chemistry and Molecular Engineering of Peking University, Beijing, China)

Application of Glass Micro/Nanopipettes in Analytical Chemistry

15:20 to 15:40

Damien Arrigan (Nanochemistry Research Institute, Department of Chemistry, Curtin University, Perth, Australia), Eva Alvarez de Eulate, Shane O Sullivan

Detection of proteins by voltammetry at water-organogel interfaces: influence of adsorption and surfactant on analytical performance

15:40 to 16:00 **Invited**

Kate Meadows (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Patrick Unwin

A New Approach for Fabricating Microscale Lipid Bilayers at Glass Pipettes: Ion Transport and Passive Permeation Visualization

16:00 to 16:20

Henrik Jensen (Department of Pharmacy, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark), Rune Andersen Hartvig, Jesper Ostergaard, Marco Van de Weert, Lene Jorgensen

Protein Adsorption at Biomimetic Liquid-Liquid Interfaces: The role of Electrostatic Interactions, Dielectric Layers and Charge Regulation

16:20 to 16:40

Coffee Break

16:40 to 17:00

Michael Cecchini (Department of Chemistry, Imperial College London, London, United Kingdom)

Trace Detection of Analytes using Surface Enhanced Raman Scattering at the Liquid-Liquid Interface

17:00 to 17:40 **Keynote**

Takashi Kakiuchi (Kyoto University, Kyoto, Japan)

Ionic Liquid Salt Bridge Enables accurate Determination of Single Ion Activities in Electrolyte Solutions

17:40 to 18:00

Zdenek Samec (J. Heyrovský Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Jan Langmaier, Stanislav Zalis

Dielectric Permittivity of Highly Hydrophobic Ionic Liquids Used in Electrochemical Studies of Ion Transfer

18:00 to 18:20

Jingyuan Chen (Department of Applied Physics, University of Fukui, Fukui, Japan), Koichi Aoki, Qian Wang, Jie Yu

Contribution of Emulsification to Thickness of Three-Phase Boundaries

Symposium 15: General Session

Room : Stella

Chaired by: Marta Figueiredo, Masatoshi Osawa

14:20 to 14:40

David Harrington (Department of Chemistry, University of Victoria, Victoria, Canada)

The Rate-Determining Step in EIS

14:40 to 15:00

Franz Richter (Institute of Technical Thermodynamics, German Aerospace Center (DLR), Stuttgart, Germany), Carl-Albrecht Schiller, Norbert Wagner

Relaxation Impedance - The Nature of Inductive and Capacitive Behaviour in Low Frequency Impedance Spectra of Corroding Electrodes, Batteries and Fuel Cells

15:00 to 15:20

Tom Breugelmans (Artesis University College Antwerp, Antwerpen, Belgium), John Lataire, Thibault Muselle, Rik Pintelon, Annick Hubin

Electrochemical Impedance Spectroscopy to quantify the non-stationary behaviour of a rapidly evolving electrochemical process: an instantaneous impedance value

15:20 to 15:40

Aleksandar Zeradjanin (Anal. Chem. - Elektroanalytik & Sensorik, Ruhr-Universität Bochum, Bochum, Germany), Wolfgang Schuhmann

Evaluation of Gas Evolving Electrodes via Local Electrochemical Noise Measurements

15:40 to 16:00

Peter Laszlo (MTA Wigner Research Centre for Physics, Budapest, Hungary)

Reverse composition depth profile analysis of electrodeposited alloys

16:00 to 16:20

Sönke Schmachtel (Aalto University, Espoo, Finland), David Lloyd

Transient Experiments for the Rotating Disc Electrode

16:20 to 16:40

Coffee Break

16:40 to 17:00

Andrea Ravalli (Department of Chemistry, Sesto Fiorentino, Firenze, Italy), Giovanna Marrazza

Gold Nanostructures for Affinity Biosensing Applications

17:00 to 17:20

Abbas Shirmardi-Dezaki (Islamic Azad University, Branch Masjed Soleiman, Masjed Soleiman, Iran)

An Electronic Tongue for Simultaneous Determination of Cyanide, Thiocyanate and Iodide in Presence of Chloride

17:20 to 17:40

Fabiano Gonzaga (National Institute of Metrology, Quality and Technology, Duque de Caixas, Brazil), Sidney Sobral

A New Method for Determining the Acid Number of Biodiesel Based on Coulometric Titration

17:40 to 18:00

Edilson Moura Pinto (Pós Graduação, Universidade Sagrado Coração, Bauru, Brazil), Jéssica Cleidiane Paraizo Magalhães, Wyllerson Gomes, David Mendez Soares, Antônio Carlos Dias Ângelo

Dynamics of formation of electropolymarized thin films of Rhodamine B on gold electrodes of EQCM

Tuesday, 21 August 2012 - Morning

Plenary

Room : Meridian

Chaired by: Ladislav Kavan

08:30 to 09:30

Kazunari Domen (Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan)

Photocatalytic and photoelectrochemical water splitting based on oxynitride materials

10:20 to 10:40

Coffee Break

Symposium 1: Recent Advances in Electrochemical Instrumentation and Electrodes

Room : Kepler

Chaired by: Alison Downard, Daniel Mandler

09:40 to 10:20 **Keynote**

Constant van den Berg (Ocean Sciences, Liverpool University, Liverpool, United Kingdom), Zhaoshun Bi, Pascal Salaun, Mahmoud Abu Alhaija

Electrodes in Stripping Voltammetry: Can we do without Mercury?

10:20 to 10:40

Coffee Break

10:40 to 11:00

Albert Schulte (Biochemistry - Electrochemistry Research Unit, Schools of Chemistry and Biochemistry, Institute of Science, Suranaree University of Technology, Nakhon Ratchasima, Thailand), Wolfgang Schuhmann, Sireerat Intarakamhang

Robotic Stripping Voltammetry of Trace Lead and Cadmium in Water and Soil Samples

11:00 to 11:20

Tomas Navratil (Department of Biophysical Chemistry, J. Heyrovský Institute of Physical Chemistry of the AS CR, Prague, Czech Republic), Jana Jaklova Dytrtova, Ivana Sestakova, Martina Parisova, Katerina Novakova, Vladimir Marecek

Application of Electrochemical Techniques for Elucidation of Transport of Hazardous Metals across the Phospholipid Membranes

11:20 to 11:40 **Invited**

Sabine Szunerits (Interdisciplinary Research Institute, Villeneuve d'Ascq, France), Rabah Boukherroub, Yannick Coffinier

Boron-doped diamond nanowires: A new interface for sensitive electrochemical detection

11:40 to 12:00

Hasuck Kim (Department of Energy Systems DGIST, Daegu, Korea), Yongtak Yang, Jeong-Wook Oh, Ik-Soo Shin, Yang-Rae Kim

Enhanced Electrogenerated Chemiluminescence on Boron-doped Diamond Electrode

12:00 to 12:20

Guzel Ziyatdinova (Department of Analytical Chemistry, Kazan (Volga Region) Federal University, Kazan, Russia), Herman Budnikov

Carbon Nanotube Based Amperometric Sensors for Determination of Phenolic Antioxidants

12:20 to 12:40

Yann Leroux (Institut des Sciences Chimiques de Rennes, Université de Rennes 1, Rennes Cedex, France), Jean-Marc Noel, Fei Hui, Clément Roux, Alison J. Downard, Jaime Ruiz, Didier Astruc, Philippe Hapiot

Diazonium Electrochemistry as Powerful Tool to Achieve Functional Monolayer onto Carbon Surfaces

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Room : Leo

Chaired by: Lo Gorton, Judith Rishpon

09:40 to 10:00

Shelley Minteer (University of Utah, Salt Lake City, USA)

Mitochondrial-based Voltammetric Toxicity Sensor

10:00 to 10:20

Judith Rishpon (Department of Biotechnology, Tel-Aviv, Israel)

Cancer Diagnosis Based on Electrochemical Distinction Between Cancerous and Healthy Biopsies

10:20 to 10:40

Coffee Break

10:40 to 11:00

Keith Baronian (School of Biological Sciences, University of Canterbury, Christchurch, New Zealand), Frankie Rawson, Alison Downard

Electrochemical detection of intracellular and cell membrane redox systems in Saccharomyces cerevisiae

11:00 to 11:20

Lo Gorton (Department of Biochemistry and Structural Biology, Lund University, Lund, Sweden), Kamrul Hasan, Sunil A Patil, Kamil Górecki, Dónal Leech, Cecilia Hägerhäll

Electrochemical Communication between Rhodobacter capsulatus and Shewanella oneidensis and Electrodes Mediated by Os-Redox Polymers

11:20 to 11:40

Kun Guo (Advanced Water Management Centre, The University of Queensland, Brisbane, Australia), Stefano Freguia, J. Justin Gooding, Bogdan Donose, Jurg Keller, Korneel Rabaey

The Effects of Surface Chemistry on Biofilm Formation and Current Generation in Bioelectrochemical Systems

11:40 to 12:00

Frankie J. Rawson (School of Chemical Engineering, University of Birmingham, Birmingham, United Kingdom), Simon K Jackson, Chun L Young, Paula M. Mendes

The Development of Nanostructured Indium Tin Oxide Surfaces for Electrochemical Intracellular Sensing

12:00 to 12:20

Cigdem Yildirim (Institute of Biochemistry and Biology, University of Potsdam, Potsdam, Germany), Miriam Adamovski, Matthias Gerhardt, Carsten Beta, Dafna Benayahu, Agneszka Mech-Dorosz, Zsófia Keresztes, Zoltan Varga, Jenny Emneus, Ulla Wollenberger

Redox Control of Enzyme Activity and its Role for Monitoring Cell Differentiation on a Sensor Chip

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Wolfgang Schuhmann, Jay Wadhawan

10:40 to 11:20 **Keynote**

Alexander Bittner (CIC nanoGUNE, Donostia-San Sebastian, Spain), Abid Ali Khan, Marcin Gorzny, Jose Maria Alonso

Construction and architecture of virus-inorganic nanostructures

11:20 to 11:40 **Invited**

Edmond Magner (Department of Chemical and Environmental Sciences and Materials and Surface Sciences Institute, University of Limerick, Limerick, Ireland)

Immobilisation of Redox Enzymes; The Effects of Electrolytes and of Nonaqueous Solvents

11:40 to 12:00

Vinicius Gonçales (Instituto de Química, Universidade de São Paulo, São Paulo, Brazil), Marco Minadeo, Filipe Nogueira, Elaine Matsubara, José Maurício Rosolén, Susana Cordoba de Torresi

Carbon micro/nanostructures for third generation biosensors

12:00 to 12:20

Fabien Giroud (Departments of Chemistry and Materials Science & Engineering, University of Utah, Salt Lake City, USA), Matthew T. Meredith, Shelley D. Minteer

Electrochemically Azine-modified CNTs Embedded in Hydrogel Scaffold for NADH oxidation

12:20 to 12:40

Fredrik Björefors (Departments of Chemistry, Ångström Laboratory, Uppsala University, Uppsala, Sweden), Anders Lundgren

Gold Nanoparticle Gradients on Bipolar Electrodes

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Joachim Maier

10:40 to 11:20 **Keynote**

Robert Kostecki (EETD, LBNL, Berkeley, USA), Ivan Lucas, Nicolas Norberg, Jaroslaw Syzdek, Vasileia Zormpa, Richard Russo

In situ Characterization of Electrical Energy Storage Systems with Far- and Near-Field Multiprobe Techniques

11:20 to 11:40 **Invited**

Daniel Abraham (Argonne National Laboratory, Argonne, USA)

Mitigating the Performance Degradation of High-Energy Lithium-ion Cells

11:40 to 12:00

Thomas Richardson (Lawrence Berkeley National Laboratory, Berkeley, USA), Chutchamon Sirisopanaporn, Venkat Srinivasan, Jun Liu, Vassilia Zorba

Determination and Evaluation of Charge Distribution in Lithium Battery Electrodes

12:00 to 12:20

Mickael Dollé (CEMES/CNRS, Toulouse, France), Abdelmaula Aboulaich, Vincent Seznec, Gaelle Delaizir, Laurence Tortet, Mathieu Morcrette, Patrick Rozier, Jean-Marie Tarascon, Virginie Viallet, Renaud Bouchet

Development of Safe All Inorganic Li-Ion Batteries

12:20 to 12:40

Stefania Ferrari (Chemistry Department, University of Pavia, Pavia, Italy), Clelia Spreafico, Cristina Tealdi, Marcella Bini, Doretta Capsoni, Piercarlo Mustarelli, Patrizia Canton

$Li_2Mn_{0.5}Fe_{0.5}SiO_4$ Cathode Material: Structural and Electrochemical Characterization

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Deborah Jones, Peter Strasser

10:40 to 11:20 **Keynote**

Timo Jacob (Institute for Electrochemistry, Ulm University, Ulm, Germany)

Modeling Electrocatalytic Reactions

11:20 to 11:40

Alejandro Franco (Atomic and Alternative Energies Commission of France (CEA) - LITEN/DEHT/LCPEM, Grenoble, France)

Competitions and synergies between materials degradation mechanisms in PEM Fuel Cells

11:40 to 12:00

Shixue Liu (Inamori Frontier Research Center, Kyushu University, Fukuoka, Japan), Teppei Ogura, Takayoshi Ishimoto, Michihisa Koyama

DFT Study of Electro-oxidation of Methane Fuel under Electric Potential in Solid Oxide Fuel Cell

12:00 to 12:20

Takayoshi Ishimoto (Inamori Frontier Research Center, Kyushu University, Fukuoka, Japan), Shixue Liu, Michihisa Koyama

Theoretical Study on Chemical Reaction Mechanism on Electrocatalyst with Electric Potential

12:20 to 12:40

Shi-Gang Sun (Department of Chemistry, Xiamen University, Xiamen, China), Jin-Yu Ye, Cheng-Deng Xu, Jun-Tao Li, Chun-Hua Zhen

Structure tuning mechanism of functional agents in shape-controlled synthesis of metal nanoparticle catalysts — A fundamental understanding through studies of adsorption of citrate on Pt single crystal surfaces

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Room : Taurus

Chaired by: Giovanni Zangari

09:40 to 10:00 **Invited**

Valentina Ivanova (CEA, LETI, MINATEC Campus, Grenoble, France), Raul Salazar, Sylvia Sanchez, Cyril Chappaz-Gillot, Solenn Berson, Stéphane Guillerez, Claude Lévy-Clément

Electrochemically and Chemically Prepared Semiconductors an Alternative for Low Cost Photovoltaics

10:00 to 10:20

Christian Lupo (Justus-Liebig-University Giessen, Institute of Applied Physics, Giessen, Germany), Martina Stumpp, Derck Schlettwein

Diffusion Limited Electrodeposition of ZnO on Microstructured Electrode Arrays

10:20 to 10:40

Coffee Break

10:40 to 11:00 **Invited**

Thierry Pauporté (ENSCP-Paris, Paris, France), Victoire-Marie Guérin, Constance Magne

Electrochemical design of ZnO structures for the fabrication of efficient dye-sensitized solar cells

11:00 to 11:20 **Hans-Jürgen Engell Prize**

Jamil Elias (Mechanics of Materials and Nanostructures EMPA - Materials Science & Technology, Thun, Switzerland , Switzerland), Mikhael Bechelany, Ivo Utke, Johann Michler, Laetitia Philippe

Nanostructured Solar Cells Based on Electrodeposited Ordered Arrays of Urchin-like Building Blocks

11:20 to 11:40

Aurélien Duchatelet (IRDEP, Institute of R&D on Photovoltaic Energy, Chatou, France), Gregory Savidand, Elisabeth Chassaing, Daniel Lincot

One-step Electrochemical Deposition of Cu-In-Ga Mixed Oxide Thin Film Precursor for CIGS Solar Cells

11:40 to 12:00

Yi Ma (Chemical and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden), Warunna Wijesekara, Elisabet Ahlberg, Ye Sun, Bo B. Iversen, Anders Palmqvist

Electrochemical Deposition and Characterization of Thermoelectric Thin Films of Bismuth Telluride and Its Derivatives

12:00 to 12:20

Natalia Tintaru (Department of Physical Chemistry, Vilnius University, Vilnius, Lithuania), Elizabeth Podlaha-Murphy, Henrikas Cesiulis

Anodization of Titanium and Photoelectrochemical Behaviour of Obtained Films

12:20 to 12:40

Jonathan Szymczak (Institut Jean Lamour, UMR 7198, Groupe Electrochimie et Chimie des Matériaux - Université de Lorraine, Metz, France), Sophie Legeai, Sébastien Diliberto, Nicolas Stein, Clotilde Boulanger

Template-free electrodeposition of Te nanowires in a piperidinium-based ionic liquid

Symposium 10: Electrochemical Process Engineering and Technology

Room : Virgo

Chaired by: Henry Bergmann, Masatsugu Morimitsu

09:40 to 10:00

Antoine Allanore (Department of Materials Science & Engineering, Cambridge, USA), Andrew J. Gmitter, Donald R. Sadoway

Oxygen Evolution in Molten Oxide Electrolyte: an Electrochemical Engineering Questioning

10:00 to 10:20

Reidar Tunold (Department of Materials Science and Engineering, NTNU, Trondheim, Norway), Espen Sandnes, Geir M. Haarberg

Anodic Behaviour of Carbon in Chloride-Oxide Melts

10:20 to 10:40

Coffee Break

10:40 to 11:20 **Keynote**

Edward Roberts (School of Chemical Engineering and Analytical Science, University of Manchester, Manchester, United Kingdom)

Electrochemical Treatment of Organic Contaminants in Water and Wastewater

11:20 to 11:40

Stefanie Hild (DECHEMA-Forschungsinstitut, Frankfurt, Germany), Klaus-Michael Mangold, Jürgen Schuster, Claudia Weidlich, Tobias Augenstein, Marc Boxler, Heico Schell, Andreas Tiehm

Electrochemical Degradation of Pharmaceuticals in Waste Water using a combined Adsorption-Polarization Process

11:40 to 12:00

Ignacio Sirés Sadornil (Departament de Química Física, Facultat de Química, Universitat de Barcelona, Laboratori d'Electroquímica dels Materials i del Medi Ambient, Barcelona, Spain), Abdoulaye Thiam, Enric Brillas, Conchita Arias, Rosa M. Rodríguez, José A. Garrido, Francesc Centellas, Pere L. Cabot

Electrochemical Treatment of Food Azo-Colours. Study of Reactivity in Different Electrolytes and Batch Cells

12:00 to 12:20

Onofrio Scialdone (Dipartimento di Ingegneria Chimica, Gestionale, Informatica, Meccanica, Università degli Studi di Palermo, Palermo, Italy), Alessandro Galia, Chiara Guarisco, Simona Sabatino, Simona La Mantia

Electrochemical abatement of organic pollutants in water in microfluidic devices

Symposium 12: Photoelectrochemistry, Electrochromism and Electrochemiluminescence

Room : Aquarius

Chaired by: Carlos Alberto Castro Ruiz

09:40 to 10:20 **Keynote**

Frank Marken (Department of Chemistry, Bath, United Kingdom)

Photo-Processes at Liquid | Liquid | Electrode Triple Phase Boundary Interfaces

10:20 to 10:40

Coffee Break

10:40 to 11:00 **Invited**

Massimo Marcaccio (Dipartimento di Chimica "G. Ciamician", Università di Bologna, Bologna, Italy)

Electrochemistry and Electrochemiluminescence: from Molecular Systems to Nanostructures

11:00 to 11:20

Laurent Ruhlmann (Université de Strasbourg, Strasbourg, France), Iftikard Ahmed

Polyoxometalate-porphyrin nanoarchitectures for the generation of photocurrent

11:20 to 11:40

Conor F. Hogan (Department of Chemistry, La Trobe Institute for Molecular Science, La Trobe University, Melbourne, Australia), Egan Doevan, Paul Francis

New Dimensions in Electrochemiluminescence

11:40 to 12:00

Yuriy Zholudov (Kharkiv National University of Radioelectronics, Kharkiv, Ukraine), Olena Bilash, Anatoliy Kukoba, Mykola Rozhitskii

Tetraphenylboron Coreactant for Electrochemiluminescent Systems

12:00 to 12:20

Konrad Schönleber (Department of Physics, Technische Universität München, Garching, Germany), Benedikt Weiler, Giuseppe Scarpa, Paolo Lugli, Katharina Krischer

Size dependence of the Photoelectrochemical Properties of gold structures on p-type silicon

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Marc Koper, Anthony Kucernak

09:40 to 10:20 **Keynote**

Ayusman Sen (Department of Chemistry, Pennsylvania State University, University Park, USA)

Designing Self-Powered Catalytic Nanomotors and Pumps

10:20 to 10:40

Coffee Break

10:40 to 11:00

Joshua Edel (Department of Chemistry, Imperial College London, United Kingdom)

Synergistic Folding Study of Intrinsically disordered proteins using Solid-State Nanopores

11:00 to 11:20

Gabriel Loget (Institut des Sciences Moléculaires, Université de Bordeaux, Pessac, France), Zahra Fattah, Laurent Bouffier, Alexander Kuhn

Bipolar Electrochemistry for the Design of Smart Micromachines

11:20 to 11:40 **Invited**

Qiming Zhang (Electrical Engineering Department and Materials Research Institute, Penn State University, University Park, USA)

Understanding Ion Transport and Storage in Ionic Electroactive Polymer Actuators

11:40 to 12:00

Ernesto Calvo (INQUIMAE/DQIAyQO, Buenos Aires, Argentina), Mario Tagliazucchi, Alejandra Ricci

Charge Regulation in Redox Active Monolayers Embedded in Proton Exchanger Surfaces

12:00 to 12:40 **Prix Jacques Tacussel**

Kingo Itaya (Department of Applied Chemistry, Tohoku University, Sendai, Japan)

Direct Visualization of Electrode Processes with Single Atomic Step Resolution by LCM-DIM

Symposium 14: Electrochemistry at Liquid-Liquid Interfaces

Room : Quadrant

Chaired by: Vladimír Marecek

09:40 to 10:20 **Keynote**

Robert Dryfe (School of Chemistry, University of Manchester, Manchester, United Kingdom), Yvonne Gruender, Sven Schroeder, Andrew Rodgers

Solids at the Liquid-Liquid Interface

10:20 to 10:40

Coffee Break

10:40 to 11:00 **Invited**

Michael Urbakh (School of Chemistry, Tel Aviv University, Tel Aviv, Israel)

Theoretical Approaches to Voltage-Induced Assembly of Nanoparticles at ITIES: Structure, Characterization, Function

11:00 to 11:20

Yvonne Grunder (University of Manchester, Manchester, United Kingdom)

Electrodeposition of nanoparticles at the liquid-liquid interface

11:20 to 11:40

Maria Peshkova (St. Petersburg State University, St. Petersburg, Russia), Konstantin Mikhelson

Solvent Polymeric Membrane Ion-Selective Electrodes under Galvanostatic Control: A Powerful Tool for Analysis of Extremely Diluted Samples

11:40 to 12:00

Barry Silver (Department of Biophysical Chemistry J.Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Vladimir Marecek, Karel Holub

Experimental and theoretical studies concerning ion current rectification phenomena at novel glass microcapillaries.

12:00 to 12:20

Koichi Aoki (Department of Applied Physics, Fukui, Japan)

Self-Dispersion of Oil, Gas and Mercury into Water near the Interfaces

Symposium: General Session

Room : Stella

Chaired by: Klaas Jan Schouten, Tamaz Agladze

09:40 to 10:00

Klaas Jan Schouten (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Zhisheng Qin, Elena Pérez Gallent, Marc Koper

The electrochemical conversion of carbon dioxide to hydrocarbons: two pathways for the formation of ethylene

10:00 to 10:20

Marta Figueiredo (Instituto de Electroquimica, Universidad de Alicante, Alicante, Spain), Víctor Climent

Platinum well oriented surfaces modified with bismuth adatoms as catalysts for reduction of nitrogen containing compounds

10:20 to 10:40

Coffee Break

10:40 to 11:00

Jiang Li (Materials & Structures Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Toshio Fuchigami, Shinsuke Inagi, Hideo Hosono, Setsuro Ito

Electrochemical carboxylation of olefins at $12CaO•7Al_2O_3$ electride cathode without sacrificial anode

11:00 to 11:20

Tamaz Agladze (Georgian Technical University, Department of Electrochemical Engineering, Tbilisi, Georgia), Marine Donadze, Maia Gabrichidze

Size Dependent Reactivity of Metal Nanoparticles

11:20 to 11:40

Silvia Leonardi (Physik Department, Technische Universität München, Garching, Germany), Andrea Li Bassi, Valeria Russo, Fabio Di Fonzo, Odysseas Paschos, Thomas M. Murray, Harry Efstathiadis, Julia Kunze

TiO_2 nanotubes –Interdependence of Substrate Grain orientation and Growth Characteristics

11:40 to 12:00

Ana Maria Valenzuela-Muñiz (Center for Electrochemical Engineering Research, Ohio University, Athens, USA), Gerardine Botte

Carbon Nanostructures from Coal over Metallic Foils: Evaluation of the Electrochemical Properties

12:00 to 12:20

Mária Ujvári (Institute of Chemistry, Eötvös Loránd University, Budapest, Hungary), Gyözö G. Láng

Investigation of perchlorate reduction on different metals

12:20 to 12:40

Taeyoung Kim (World Class University (WCU), Program of Chemical Convergence for Energy & Environment (C2E2), School of Chemical and Biological Engineering, College of Engineering, Seoul National University (SNU), Seoul, Korea), Jaehan Lee, Junil Kang

Role of Carbon Electrode Properties in Capacitive Deionization

Tuesday, 21 August 2012 - Afternoon

Symposium 1: Recent Advances in Electrochemical Instrumentation and Electrodes

Room : Kepler

Chaired by: Alison Downard, Tomas Navratil, Patrick Unwin, Gunther Wittstock

14:20 to 14:40

Mathieu Etienne (LCPME/CNRS, Villers-les-Nancy, France)

New features in non-optical shearforce control for SECM

14:40 to 15:00

Janine Mauzeroll (Department of Chemistry, McGill University, Montreal, Canada), Renaud Cornut, Stéphanie Poirier

Forced Convection during Feedback Approach Curve Measurements in Scanning Electrochemical Microscopy (SECM): Maximal Displacement Velocity with a Microdisk

15:00 to 15:20

Michael Snowden (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Aleix Guell, Stanley Lai, Kim McKelvey, Neil Ebejer, Michael O'Connell, Alex Colburn, Patrick Unwin

Scanning Electrochemical Cell Microscopy: Spatially Resolved Visualization of Fast Surface Kinetics

15:20 to 15:40

Bernhard Gollas (Institute for Chemistry and Technology of Materials, University of Technology, Graz, Austria), Ming Wu, Christian Zelger, Amra Avdic, Alois Lugstein, Emmerich Bertagnolli, Ilya Pobelov, Thomas Wandlowski, Kelly Leonhardt, Guy Denuault

Cone-Shaped Nanoelectrodes for Simultaneous AFM and SECM Imaging

15:40 to 16:20 **Keynote**

Yuri Korchev (Imperial College, Faculty of Medicine, Division of Medicine, London, United Kingdom), Pavel Novak, Andrew Shevchuk, Yasufumi Takahashi, Tomokazu Matsue, Patrick Unwin, Babak Babakinejad, Uma Anand

Scanning Ion Conductance Microscopy of Soft Biological Matter

16:20 to 16:40 Coffee Break

16:40 to 17:00 **Invited**

Michael Mirkin (Department of Chemistry, Queens College, CUNY, Flushing, USA), Wojciech Nogala, Jeyavel Velmurugan, Jean-Marc Noël

Nanoelectrochemistry under AFM Control

17:00 to 17:20

Yige Zhou (Department of Chemistry, Physical & Theoretical Chemistry Laboratory, Oxford University, United Kingdom)

The electrochemistry of single nanoparticles via nanoparticle-electrode collision processes

17:20 to 17:40

Anna Valota (School of Chemistry, The University of Manchester, Manchester, United Kingdom), Ian Kinloch, Konstantin Novoselov, Ernie Hill, Robert Dryfe

Electrochemical Investigation of Graphene on the Microscale

17:40 to 18:00

Andreas Lesch (Department of Pure and Applied Chemistry, CIS, Center of Interface Science, Faculty of Mathematics and Natural Sciences, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany), Britta Vaske, Dmitry Momotenko, Fernando Cortes-Salazar, Daniel Witte, Ingo Wirth, Hubert H. Girault, Gunther Wittstock

SECM imaging with soft microelectrode arrays - achievements and future challenges

18:00 to 18:20

Yoon-Bo Shim (Department of Chemistry, Pusan National University, Busan, Korea), Hui-Bog Noh, You-Jeong Kim

The Study for an Electroanalytical Method with a Microfluidic Channel Based on AC Potential Modulation

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Room : Leo

Chaired by: Alan Bond, Hua-Zhong Yu

14:20 to 15:00 **Keynote**

Michael Hill (Department of Chemistry, Occidental College, Los Angeles, USA), Nick Saade

Electrochemistry at DNA-Modified Electrodes: From Charge Transport through the π-Stack to DNA-Based Sensors

15:00 to 15:20

Elena E. Ferapontova (Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus C, Denmark), Alireza Abi, Elahe Farjami, Lilia Clima

Kinetic Studies of Electron Transfer Reactions in Redox-Labeled DNA Tethered to Electrodes

15:20 to 15:40

Gilbert Nöll (Fac.IV/Dept. Chem.-Biol., Organic Chemistry, Siegen University, Siegen, Germany), Yaming Yu, Björn Heidel, Roman Sheparovych, Tamara Parapugna, Sabine Wenderhold-Reeb, Bo Song, Holger Schönherr, Martin Grininger

The Flavin-Binding Protein Dodecin as a Probe in Order to Study Electron Transfer Through DNA

15:40 to 16:00

Robert Peter Johnson (School of Chemistry, University of Southampton, Southampton, United Kingdom), James Richardson, Tom Brown, Philip Bartlett

Denaturation of DNA at Electrode Surfaces: Puzzles and Applications

16:00 to 16:20

Vladimir Vetterl (Institute of Biophysics AS CR, Brno, Czech Republic), Stanislav Hason, Lukáš Fojt

Two-dimensional Condensation of Nucleic Acids Components, Stacking Interactions and the Origin of Life at the Earth

16:20 to 16:40

Coffee Break

16:40 to 17:20 **Keynote**

Chunhai Fan (Division of Physical Biology, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai, China)

Designing DNA sensors at the nanoscale

17:20 to 17:40 **Tajima Prize**

Hua-Zhong Yu (Simon Fraser University, Burnaby, Canada), Bixia Ge, Yu-Chuan Huang, Dipankar Sen

DNA Mechatronics: Designed Duplex/Quadruplex Constructs as Electronic Switches

17:40 to 18:00

Zbigniew Stojek (Department of Chemistry, University of Warsaw, Warsaw, Poland), Anna Nowicka, Agata Kowalczyk, Marcin Mackiewicz, Slawomir Sek

Monitoring of conformation change and damage of double stranded DNA triggered by action of OH• radicals and UV irradiation

18:00 to 18:20

Minh Chau Pham (University Paris Diderot, Sorbonne Paris Cité, ITODYS, UMR 7086 CNRS, Paris, France)

An Innovative Strategy for Label-free and Reagentless Electrochemical Detection of Micro RNAs: Application to Prostate Cancer Biomarker miR-141

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Sergey Shleev, Ulla Wollenberger

14:20 to 14:40

Hiroshi Aoki (National Institute of Advanced Industrial Science and Technology (AIST), Ibaraki, Japan), Tsutomu Fujikake, Masaki Torimura

Integrated Gene Sensor Array Chips: Fabrication and Application to Simultaneous Label-Free Gene Detection

14:40 to 15:00

Jiri Barek (Department of Analytical Chemistry, Faculty of Science, Charles University in Prague, Prague, Czech Republic), Hana Dejmkova, Jan Fischer, Vlastimil Vyskocil, Oxana Yosypchuk

New Electrode Materials for Monitoring of Chemical Carcinogens and Biomarkers of Their Exposition

15:00 to 15:20

Christa Brosseau (Department of Chemistry, Saint Marys University, Halifax, Canada), Reem Karaballi, Andrew Nel, Jonathan Blackburn

Electrochemical SERS for Rapid Detection of TB Biomarkers

15:20 to 15:40

Kumi Y. Inoue (Micro System Integration Center, Tohoku University, Sendai, Japan), Satoko Takahashi, Hayato Kodama, Kosuke Ino, Hitoshi Shiku, Tomokazu Matsue

Development of Electrochemical Detection Method for Highly-Sensitive Endotoxin Assay Based on Zymogen Activation Cascade Reactions

15:40 to 16:00 **Invited**

Jan Labuda (Slovak University of Technology in Bratislava, Bratislava, Slovakia), Katarina Benikova

Possibilities of DNA damage estimation using electrochemical biosensor and complex detection approach

16:00 to 16:20

Hong-Yuan Chen (Department of Chemistry, Nanjing University, Nanjing, China), Chun-Yuan Tian, Wei-Wei Zhao, Jing Wang, Jing-Juan Xu

Amplified Quenching of Electrochemiluminescence from CdS Sensitized TiO_2 Nanotubes by CdTe-Carbon Nanotube Composite for Detection of Prostate Protein Antigen in Serum

16:20 to 16:40

Coffee Break

16:40 to 17:00

James Rusling (Department of Chemistry, University of Connecticut, Storrs, USA), Ruchika Malhotra, Bhaskara Chikkaveeraiah, Vyomesh Patel, Silvio Gutkind

Oral Cancer Diagnostics in the Clinic using Multiplexed Microflow Detection of Four Cancer Biomarker Proteins

17:00 to 17:20

Tomoyuki Yasukawa (Graduate School of Material Science, University of Hyogo, Hyogo, Japan), Takuya Goto, Yoshimi Yoshimoto, Fumio Mizutani

Highly-Sensitive Immunosensing Method Based on Dual Amplification Systems

17:20 to 17:40

Benoit Piro (University Paris Diderot, Chemistry Department, Paris, France), Vinh Hoang Tran, Steeve Reisberg, Minh Chau Pham

Label-free Impedimetric Immunosensor for Pesticide Detection

17:40 to 18:00

Md. Aminur Rahman (Graduate School of Analytical Science and Technology (GRAST), Chungnam National University, Daejeon, Korea), Rashida Akter, Bongjin Jeong, Choong Kyun Rhee

Electrochemical Immunosensors Using Bio-inspired Polymer and Various Amplifications Strategies

18:00 to 18:20

Wlodzimierz Kutner (Institute of Physical Chemistry of the Polish Academy of Sciences, Warsaw, Poland), Tan-Phat Huynh, Agnieszka Pietrzyk-Le, Chandra Bikram K. C., Krzysztof Noworyta, Janusz W. Sobczak, Francis DSouza

Electrochemically Synthesized Molecularly Imprinted Polymer of Thiophene Derivatives for Flow-injection Analysis Determination of Adenosine 5'-triphosphate (ATP)

18:20 to 18:40

Haesik Yang (Department of Chemistry, Pusan National University, Busan, Korea), Md. Rajibul Akanda, Kyungmin Jo

Electrochemical-Chemical-Chemical Redox Cycling for Ultrasensitive Immunosensors

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Giovanni Battista Appetecchi, Robert Kostecki

14:20 to 14:40

Nikolay Dimov (Kyushu University, Kasuga, Japan), Akihiro Nishimura, Kuniko Chihara, Ayuko Kitajou, Shigeto Okada, Jun-ichi Yamaki

$NaMF_3$ Metal Fluoride Cathodes for Na Secondary Batteries

14:40 to 15:00

Daniel Buchholz (Institute of Physical Chemistry, University of Muenster, Muenster, Germany), Arianna Moretti, Martin Winter, Stefano Passerini

Synthesis and Characterization of a new, layered Sodium transition metal oxide Cathode Material for Sodium-Ion Batteries

15:00 to 15:20

Alexandre Ponrouch (ICMAB-CSIC, Bellaterra, Spain), Elena Marchante, Matthieu Courty, Sylvie Grugeon, Jean-Marie Tarascon, M. Rosa Palacín

Na-ion battery electrolytes: alternatives to the "standard" $NaClO_4$ in PC

15:20 to 15:40

Prabeer Barpanda (Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan), Tian Ye, Naoya Furuta, Sai Cheong Chung, Shin-ichi Nishimura, Yuki Yamada, Atsuo Yamada

Observation of the Highest Fe2+/3+ Redox Potential Approaching 4.0 V in Fluorosulphates and Pyrophosphates Polyanionic Cathodes

15:40 to 16:00 **Invited**

Shigeto Okada (Institute for Materials Chemistry and Engineering, Kyushu University, Kasuga, Japan), Nobuhito Chujo, Ayuko Kitajou, Eiji Kobayashi, Kuniko Chihara

Electrochemical Properties of Disodium Rhodizonate Cathode for Sodium Secondary Batteries

16:00 to 16:20

Emmanuel Canévet (LITEN/CEA, Grenoble, France), Julien Danet, Jean-François Colin, Sebastien Patoux, Loic Simonin

Ex situ SQUID measurements of a Li-rich layered cathode

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Kristina Edstrom (Department of Chemistry, Ångström Laboratory, Uppsala University, Uppsala, Sweden), Bertrand Philippe, Fredrik Lindgren, Remi Dedryvère, Hakan Rensmo, Danielle Gonbeau

Degradation of silicon anodes during cycling – a binder or an electrolyte problem?

17:00 to 17:20

Driss Mazouzi (Institut des Matériaux Jean Rouxel, Université de Nantes, CNRS, Nantes, France), Magali Gauthier, Philippe Moreau, Jean Bouchard, Grégory Chauvé, Dominique Pilon, Lionel Roué, Bernard Lestriez, Dominique Guyomard

Critical roles of the engineering of silicon-based electrodes for improving their cycle life in Li-ion batteries

17:20 to 17:40

Karima Lasri (Department of Chemistry Uppsala University, Uppsala, Sweden), Mohammed Dahbi, Anti Liivat, Daniel Brandell, Ismael Saadoune

Combined intercalation and conversion reactions in Li-ion battery anode materials

17:40 to 18:00

Lukas Mirko Reinold (Institut für Materialwissenschaft, Technische Universität Darmstadt, Darmstadt, Germany), Yan Gao, Gabriela Mera, Magdalena Graczyk-Zajac, Ralf Riedel

Carbon-Rich Polymer-Derived SiCN Ceramics as Anode Materials in Lithium Ion Batteries

18:00 to 18:20

Toshiyuki Momma (Waseda University, Shinjuku, Japan), Tokihiko Yokoshima, Hiroki Nara, Tetsuya Osaka

Potential Controlled Electrodeposition of SnOC from Organic Solution for Lithium Secondary Battery Anode

18:20 to 18:40

Giovanni Battista Appetecchi (ENEA (Agency for New Technologies, Energy and Sustainable Economic Development), Technical Unit UTRINN-IFC, S. Maria di Galeria (Rome), Italy), Maria Montanino, Margherita Moreno, Maria Carewska, Fabrizio Alessandrini

Ionic Liquids as Additives for Low Volatility and Low Flammability Electrolytes for Lithium Batteries

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Plamen Atanassov, Piotr Zelenay

14:20 to 15:00 **Keynote**

Piotr Zelenay (Department of Materials Physics and Applications, Los Alamos National Laboratory, Los Alamos, USA), Gang Wu, Hoon Chung, Michael Blair, Edward Holby, Christopher Taylor, Michael Neidig

Oxygen Reduction on Non-Precious Metal Fuel Cell Catalysts

15:00 to 15:20

Sanjeev Mukerjee (Department of Chemistry and Chemical Biology, Northeastern University, Center for Renewable Energy Technology, Boston, USA), David Ramaker, Nagappan Ramaswamy, Qingying Jia

Electrocatalytic Pathways in Aqueous and Non Aqueous Environments

15:20 to 15:40

Justus Masa (Department of Analytical Chemistry, Elektroanalytik & Sensorik, Ruhr-Universität Bochum, Bochum, Germany), Anqi Zhao, Wei Xia, Martin Muhler, Wolfgang Schuhmann

Metal-free catalysts for oxygen reduction. Nature of active sites and controversy of the role of trace metals

15:40 to 16:00

Jose H. Zagal (Facultad de Quimica y Biologia, Universidad de Santiago de Chile, Santiago, Chile), Ingrid Ponce, Ricardo Venegas, Jorge Pavez, Maritza Paez

The enhanced catalytic activity of heat-treated metal-Nx/C non precious metal catalysts for the reduction of O_2 attributed to a low electron density on the active site.

16:00 to 16:20

Paulo Olivi (Departamento de Química, FFCLRP Univerisidade de São Paulo - USP, Ribeirão Preto - SP, Brazil), Thiago Lopes

Preparation and performance of non precious metal based ORR catalysts

16:20 to 16:40

Coffee Break

16:40 to 17:00

Plamen Atanassov (Department of Chemical & Nuclear Engineering, Center for Emerging Energy Technologies, University of New Mexico, Albuquerque, USA), Alexey Serov, Barr Halevi, Boris Kiefer, Kateryna Artyushkova

Templated Non-Platinum Electrocatalysts for Fuel Cells

17:00 to 17:20

Francisco Jose Perez-Alonso (Institute of Catalysis and Petrochemistry Spanish National Research Council (CSIC), Madrid, Spain), Tirma Herranz, Jose Luis Gomez de la Fuente, Jose Luis G. Fierro, Miguel Antonio Peña, Mohamed Abdel Salam, Rojas Sergio

Influence of MWCNTs morphology on ORR performance of Fe-N modified carbon nanotubes

17:20 to 17:40

Masatoshi Nagai (BASE, Tokyo University of Agriculture and Technology, Koganei, Japan), Masaki Shirasaki, Kohei Suzaki

Cobalt Porphyrin and Tungsten Polyoxometalate on Graphite as a Cathod Electrocatalyst for Polymer Electrolyte Fuel Cell

17:40 to 18:00

Ulrike Kramm (Helmholtz-Centre Berlin for Materials and Energy, Institute for Solar Fuels, Berlin, Germany), Michel Lefèvre, Iris Herrmann-Geppert, Peter Bogdanoff, Jean-Pol Dodelet, Sebastian Fiechter

Fe-N-C catalysts - Investigating the degradation induced by PEM fuel cell vs. room temperature conditions

18:00 to 18:20

Jang-Soo Lee (Interdisciplinary School of Green Energy, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea), Sun Tai Kim, Gi Su Park

Iron-based N-rich melamine foam incorporated with a metal-organic-framework as highly efficient electrocatalysts for oxygen reduction reaction in aqueous solution

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Room : Taurus

Chaired by: Sachiko Ono

14:20 to 14:40

Patrik Schmuki (FAU, Erlangen, Germany)

Self-organized Oxide Nanotube Structures Formation and Applications

14:40 to 15:00

Kurt Hebert (Department of Chemical & Biological Engineering, Iowa State University, Ames, USA), Omer Capraz, Pranav Shrotriya, Fanliang Gao, Wei Hong

Morphological Instability Leading to the Formation of Self-Ordered Porous Anodic Oxide Films

15:00 to 15:20

Alaa Abd-Elnaiem (Nano Applications Materials Engineering, Imec, Leuven, Belgium), Cedric Huyghebaert, Mohamed Gaffar, Philippe Vereecken

Anodized Alumina with Tailored Pore Architectures

15:20 to 15:40

Seulgi So (Department of Materials Science, University of Erlangen-Nuremberg, Erlangen, Germany), Kiyong Lee, Patrik Schmuki

Strongly Accelerated Growth Rate of Highly Ordered Anodic TiO_2 Nanotube Layers

15:40 to 16:00

Kiyoung Lee (Department of Materials Science and Engineering, University of Erlangen-Nuremberg, Erlangen, Germany), Patrik Schmuki

(Photo)electrochemical properties of porous metal oxide formed in a glycerol/phosphate electrolyte

16:00 to 16:20

Robin Kirchgeorg (University of Erlangen, Chair of Corrosion and Surface Science, Erlangen, Germany), Wei Wei, Kiyoung Lee, Seugli So

Nitrates, a new class of electrolytes for anodic growth of self-organized oxide nanoporous layers on valve metals

16:20 to 16:40

Coffee Break

16:40 to 17:00

Chun-Yi Chen (Materials and Structures Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Kazunari Ozasa, Ken-ichi Katsumata, Masaaki Nakai, Mizuo Maeda, Mitsuo Niinomi, Kiyoshi Okada, Nobuhiro Matsushita

Fabrication of Self-organized Ti–Nb–Ta–Zr Mixed Oxide Nanotubes Array and Applications

17:00 to 17:20

Sophie Lebouil (Chimie Paristech LPCS UMR 7045, Paris, France), Joffrey Tardelli, Emmanuel Rocca, Polina Volovitch, Kevin Ogle

Real time measurement of oxide growth on Al 2214 T6 alloy and synthesized $Al_{68}Cu_{2.3}Fe_{7.5}Mn_{10.6}Si_{11.6}$ intermetallic phase during anodization at high potential

17:20 to 17:40

Hiroaki Tsuchiya (Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Osaka, Japan), Yoshiyuki Terada, Takahiro Suzumura, Shinji Fujimoto

Electrochemical Formation of Ordered Pore Arrays

17:40 to 18:00

Alexander Mozalev (Department of Microelectronics, Faculty of Electrical Engineering and Communication, Brno University of Technology, Brno, Czech Republic), Hiroki Habazaki, Masatoshi Sakairi, Jaromir Hubalek

Formation-structure-properties of nanocomposite mixed oxide films prepared by porous-alumina-assisted anodizing of Zr-50at.%W alloy layers

18:00 to 18:20

Aleksey Lisenkov (Department of Ceramics and Glass Engineering, University of Aveiro, Aveiro, Portugal), Andrei Salak, Sergey Poznyak, Mikhail Zheludkevich, Mario Ferreira

SKPFM studies of titanium oxide prepared by powerful pulsed discharge oxidation in different solutions

Symposium 9: Corrosion Science and Engineering

Room : Quadrant

Chaired by: Annick Hubin, Digby Macdonald

14:20 to 15:00 **Keynote**

Hiroki Habazaki (Faculty of Engineering, Hokkaido University, Sapporo, Japan), Kanbun Kure, Yoshiki Konno, Shu Yang, Etsushi Tsuji, Yoshitaka Aoki

Growth of Porous Anodic Films on Metals in Organic Electrolytes

15:00 to 15:20

Francesco Di Quarto (Electrochemical Material Science Laboratory, Palermo, Italy), Francesco Di Franco, Monica Santamaria, Maria Vittoria Diamanti, Clara Monarca, Hiroki Habazaki

Amorphous to Crystalline Transition in Anodic Oxide on Ti and Ti-Si alloys: A Photoelectrochemical Study

15:20 to 15:40

Koji Fushimi (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Kazunori Kurauchi, Takayuki Nakanishi, Yasuchika Hasegawa, Toshiaki Ohtsuka

Growth and Breakdown of Anodic Oxide Film on Titanium Observed by Ellipsometric Microscopy

15:40 to 16:00

Silvia Ceré (INTEMA, Universidad Nacional de Mar del Plata-Conicet, Mar del Plata, Argentina), Maria Katunar, Josefina Ballarre, Adrian Cisilino, Juan C. Orellano, Andrea Gomez Sanchez

Surface modification of titanium by anodic oxidation in phosphoric acid at low potentials: in vitro and in vivo study

16:00 to 16:20

Fabio La Mantia (Zentrum für Elektrochemie, Ruhr-Universität Bochum, Bochum, Germany), Fabio La Mantia, Jelena Stojadinovic, Monica Santamaria, Francesco Di Quarto

Modeling of Differential Admittance Behavior of Thin Amorphous Semiconducting Film

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Maria Forsyth (IFM Deakin University, Burwood, Australia), Patrick Howlett, Julie-Anne Latham, Peipei Huang, Douglas MacFarlane

Ionic Liquid surface film formation on reactive metals for improved corrosion performance

17:00 to 17:20

Bekir Salgin (Max-Planck-Institut für Eisenforschung GmbH, Dusseldorf, Germany), Michael Rohwerder

Ion Mobility Studies on Al_2O_3 Surfaces and on Al_2O_3/polymer Interfaces

17:20 to 17:40

Jean-Luc Trompette (Laboratoire de Génie Chimique UMR 5503, Toulouse, France)

On the unexpected influence of anion-specific effects on the electrochemical corrosion of valve metals

17:40 to 18:00

Daria Tabatabai (DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany), Florian Feil, Wolfram Fürbeth, Markus Wiesener, Sandra Szillies, Guido Grundmeier

Enhancing the corrosion properties of anodic oxide layers on magnesium alloys by incorporating encapsulated corrosion inhibitors with smart release behaviour

18:00 to 18:20

Masayuki Itagaki (Tokyo University of Science, Noda, Japan), Koichiro Isobe, Toshiki Saito, Isao Shitanda

Application of Wavelet Transformation to Investigations of Dissolution Mechanisms of Corroding Metals

Symposium 10: Electrochemical Process Engineering and Technology

Room : Virgo

Chaired by: Geoff Kelsall, Edward Roberts

14:20 to 14:40 **ISE Prize for Environmental Electrochemistry**

Cristina Sáez (Department of Chemical Engineering, University of Castilla La Mancha, Ciudad Real, Spain)

The treatment of actual wastewaters using electrochemical techniques

14:40 to 15:00

Ana Stefanova (University of Bonn, Bonn, Germany), Sevda Ayata, Siegfried Ernst, Helmut Baltruschat

Mechanistic Studies of Electrochemical Reactions at Boron Doped Diamond Electrodes in Aqueous and Nonaqueous Media and additional studies with Chemically Produced OH Radicals

15:00 to 15:20

Charlotte Racaud Jourdain (Laboratoire de Génie Chimique, Toulouse, France), Karine Groenen Serrano, André Savall, Laure Latapie, Philippe Rondet, Nathalie Bertrand

Dechlorination process in concentrated nitric acid media using boron doped diamond anode

15:20 to 15:40

Manuel Andres Rodrigo (Department of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain), Javier Llanos, Sara Mateo, Pablo Cañizares, Salvador Cotillas

Wastewater regeneration by means of an integrated electrocoagulation-electrodisinfection process

15:40 to 16:00

Dong-Mei Zhou (State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China), Guang-Ping Fang, Long Cang

Effect of Different Soil Types on the Remediation of Copper-pyrene Compound Contaminated Soils by EK-oxidation Process

16:00 to 16:20

Alan Langdon (Department of Chemistry, Engineering University of Waikato, Hamilton, New Zealand), Hilary Nath

Electrolysis of Dilute Electrolyte Solutions

16:20 to 16:40

Coffee Break

16:40 to 17:00

Henry Bergmann (Anhalt University, Koethen/Anh., Germany), Wido Schmidt, Andreas Grunert, Tamara Grummt, Tatiana Iourtchouk, Jens Hartmann, Michaela Fischer, Gabriele Nüsske, Rita Heinze, Heinz-Günter Wunderlich

Safe drinking water by Inline Electrolysis – Results of a cooperative project in Germany

17:00 to 17:20

Hyunseok Kim (Environment Group, Samsung Advanced Institute of Technology, Yongin-si, Korea), Junseon Jeong, Boksun Kwon, Dongjin Ham

A hybrid ion-exchange/electrodialysis system for high flux water softening

17:20 to 17:40

Shinji Yae (Department of Materials Science and Chemistry, Graduate School of Engineering, University of Hyogo, Himeji, Japan), Yukiko Ohno, Naoki Fukumuro, Hitoshi Matsuda

Recycling Process of Noble Metal Using Electroless Displacement Deposition on Silicon

17:40 to 18:00

Ján Híveš (Slovak University of Technology, Bratislava, Slovakia), Lucia Hrnciariková, Kamil Kerekeš

Ferrate(VI) Synthesis in a Molten Hydroxides

18:00 to 18:20

Alexandros Katsaounis (Department of Chemical Engineering, University of Patras, Patras, Greece), Evaggelos Papaioannou, Alexandros Katsaounis

Pt-TiO_2 binary electrodes for electrochemical oxidation of alcohols

Symposium 12: Photoelectrochemistry, Electrochromism and Electrochemiluminescence

Room : Aquarius

Chaired by: Magdalena Hromadova, Susana Ines Cordoba de Torresi

14:20 to 15:00 **Keynote**

Masa-aki Haga (Department of Applied Chemistry, Chuo University, Tokyo, Japan), Yu-Wu Zhong, Takuya Nakabayashi

Tuning of Redox Potentials by Introducing Cyclometalated Bonds in Mixed-valent Multilayer Films Bearing Dinuclear Ru Complex Units Toward Molecular Devices

15:00 to 15:20 **Invited**

Thomas Wandlowski (DCB Uni Bern, Bern, Switzerland), Chen Li, Bo Liu, Artem Mishchenko, Ilya Pobelov

Electrolyte Gating: *In-situ* STS and Raman Studies with Single Molecules and Molecular Ensembles

15:20 to 15:40

Carl-Albrecht Schiller (Zahner-elektrik, Kronach, Germany), Franz Richter, Michael Multerer, Uli Würfel

Impedance and Spectro-Electrochemical Measurements on Organic LED and Solar Cell Materials: The Potential Dependent Properties of the Bi-Layer PEDOT:PSS-P3HT

15:40 to 16:00 **Invited**

Lothar Dunsch (Center of Spectroelectrochemistry, IFW Dresden, Dresden, Germany), Alexey Popov

Endohedral Electrochemistry

16:00 to 16:20

Carita Kvarnstrom (University of Turku, Laboratory of Materials Chemistry and Chemical Analysis, Turku, Finland), Anna Osterholm, Beatriz Meana Esteban, Pia Damlin, Di Wei, Ari Ivaska, Andreas Petr, Lothar Dunsch

The nature of charge carriers in conjugated polymers studied by *in situ* FTIR-ATR and ESR-UV-vis-NIR spectroscopy

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Neso Sojic (University of Bordeaux, Pessac, France), Lorenzo Russo, Florent Pinaud, Yu-Chen Hsiao, Sandra Pinet, Isabelle Gosse, Valérie Ravaine

Electrochemiluminescence Amplification with Stimuli-Responsive Nanoparticles

17:00 to 17:20

Kalen N. Swanick (Department of Chemistry, The University of Western Ontario, London, Canada), Mahdi Hesari, Mark S. Workentin, Zhifeng Ding

Near-Infrared Electrochemiluminescence of Au25 Clusters

17:20 to 17:40

Giovanni Valenti (University of Bologna, Bologna, Italy), Enrico Rampazzo, Sara Bonacchi, Tahereh Khadjvand, Riccardo Juris, Marco Montalti, Massimo Marcaccio, Francesco Paolucci, Luca Prodi

Multicolour Electrochemically Generated Chemiluminescence: Silica Nanoparticles for ECL-FRET

17:40 to 18:00

Rachel M. Brown (Department of Chemistry, University of Leicester, Leicester, United Kingdom), Robert Hillman

A Study of the Fluorescent-Electrochromic Enhancement of Latent Fingerprints using 3-(pyrrol-1-yl) propylamine (PyNH2) by Neutron Reflectivity

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Renata Bilewicz

14:20 to 15:00 **Keynote**

Serge G. Lemay (MESA+ Institute for Nanotechnology, Enschede, Netherlands)

Electrochemical nanofluidics and single-molecule analysis

15:00 to 15:20

Richard Nichols (Department of Chemistry, Liverpool, United Kingdom), Nicola Kay, Gita Sedghi, Santiago Martin, Edmund Leary, Wolfgang Haiss, Thomas Doneux, Harm Van Zalinge, Simon Higgins, Donald Bethell, Horst Höbenreich, Laurent Bouffier, Jan Jeppesen, Sune Nygaard, Jens Ulstrup, Katsutoshi Sawada, Louisa Esdaile, Markus Hoffmann, Harry Anderson

Electrochemical Single Molecule Conductance Studies in Aqueous and Ionic Liquid Electrolytes

15:20 to 15:40 **Invited**

Jens Ulstrup (Department of Chemistry, Technical University of Denmark, Kongens Lyngby, Denmark), Qijin Chi, Renat R. Nazmudtinov, Michael D. Bronshtein, Tamara T. Zinkicheva, Jingdong Zhang

Electrochemical surface immobilization triggers intramolecular electron transfer in multi-centre redox metalloproteins: The di-heme protein cytochrome c_4

15:40 to 16:00 **Invited**

Ismael Diez Perez (Department of Physical Chemistry, Faculty of Chemistry, University of Barcelona, Barcelona, Spain), Zhihai Li, Josh Hihath, Nongjian Tao

Experimental studies of single molecule conduction and electrochemically gated molecular transistors

16:00 to 16:20

Stanley Lai (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Hollie Patten, Anisha Patel, Barak Aaronson, Changhui Chen, Julie Macpherson, Patrick Unwin

Electron transfer at the nanoscale: visualising reactivity at distinct electrode surface sites

16:20 to 16:40

Coffee Break

16:40 to 17:00

Eduardo Laborda (Department of Chemistry, Oxford University, Oxford, United Kingdom), Martin C. Henstridge, Yijun Wang, Danu Suwatchara, Neil V. Rees, Angela Molina, Francisco Martínez-Ortiz, Richard G. Compton

Asymmetric Marcus Theory Applied to Electrode Kinetics

17:00 to 17:20

Bin Ren (Xiamen University, Xiamen, China), Jin-Hui Zhong, Weiwei Cai

Electrochemical Raman Spectroscopy for Studying Graphene Interfaces

17:20 to 17:40

De-Yin Wu (Xiamen University, Xiamen, China), Liu-Bin Zhao, Ran Pang, Yi-Fan Huang, Bin Ren, Zhong-Qun Tian

Electrochemical Surface-Enhanced Raman Spectroscopy and Photoinduced Surface Catalytic Reactions on Nanostructured Silver Electrodes

17:40 to 18:00

Xiao-Dong Lin (Department of Chemistry, State Key Laboratory of Physical Chemistry of Solid Surfaces, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China), Viviane Uzayisenga, Li-Mei Li, Chao-Yu Li, Zhong-Qun Tian

Synthesis and Theoretical Simulation of Ag@SiO2 Nanoparticles for Electrochemical Shell-Isolated Nanoparticle-Enhanced Raman Spectroscopy

18:00 to 18:20

Eckhard Spohr (Fakultät für Chemie, Universität Duisburg-Essen, Essen, Germany), Kateryna Kravchenko, Johannes Wiebe

Reactive Trajectory Approach to Proton Discharge from Aqueous Solutions on Charged Metal Surfaces

Symposium 15: General Session

Room : Stella

Chaired by: Waldfried Plieth, Eric Vieil

14:20 to 14:40

Mosaad Negem (Department of Chemistry, Faculty of Science, Fayoum University, Fayoum, Egypt)

Electrodeposited Ni-TiO_2 and Ni-Co-TiO_2 Composites from Gluconate Baths

14:40 to 15:00

Maria Choba (Department of Electrochemistry, Faculty of Chemistry, Moscow State University, Moscow, Russia), Victor Safonov, Yurii Seropegin

Surface Segregation of Individual Components of Alloys at their Interface with Electrolyte Solutions

15:00 to 15:20

Ronan Botrel (CEA, Is sur Tille, France), Etienne Brun, Frédéric Durut, Marc Theobald, Olivier Legaie, Ghislain Pascal, Vincent Vignal

Effect of Cyanide Release and Ultrasonic Waves on the Electrocrystallisation of Au-Cu Alloys Prepared from an Alkaline Cyanide Bath

15:20 to 15:40

Elo Kibena (Institute of Chemistry, University of Tartu, Tartu, Estonia), Uno Mäeorg, Leonard Matisen, Kaido Tammeveski

A Study of Electrochemical Properties of Glassy Carbon Electrodes Modified with Azobenzene Derivatives

15:40 to 16:00

Randi Gbur (Department of Chemistry & Biochemistry, University of California Santa Barbara, Santa Barbara, USA), Cheng-chu Zeng, R. Daniel Little

Reduce, Reuse, Recycle: Mediator-Modified Electrodes for Heterogeneous Catalysis

16:00 to 16:20

Michael Voith (Institute for Chemical Technology of Inorganic Materials, Johannes Kepler University, Linz, Austria), Andrei I. Mardare, Achim Walter Hassel

Synthesis and characterization of AlMgZn thin film libraries produced by co-deposition from vapor phase

16:20 to 16:40 Coffee Break

16:40 to 17:00

Eric Vieil (LEPMI, Grenoble, France)

How Electrochemical Kinetics can be Much Simpler by using the Cross-Disciplinary Approach of Formal Graphs

17:00 to 17:20

Kiyoko Takamura (School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Yokohama, Japan), Takatoshi Matsumoto

Characterization of the Titanium(IV)-Porphyrin Reagent for Determining Hydrogen Peroxide Based on Ab Initio Calculations

17:20 to 17:40

Xuegeng Yang (Institute for Fluid Mechanics, Dresden, Germany), Sascha Mühlenhoff, Stefan Odenbach, Kerstin Eckert

Study of MHD Convection during Electrochemical Processes by Optical Methods

17:40 to 18:00

Mauro Pasta (Department of Materials Science and Engineering, Stanford University, Stanford, USA), Yi Cui, Fabio La Mantia

A Desalination Battery

18:00 to 18:20

Ichiro Koiwa (Department of Applied Material and Life Science, Faculty of Engineering, Kanto Gakuin University, Yokohama-shi, Japan), Kazuki Deguchi, Norio Hirashita, Kunimitsu Maejima

Analyses of Plated Films by Thermal Desorption Spectrometry (TDS)

Wednesday, 22 August 2012 - Morning

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Room : Leo

Chaired by: Woonsup Shin, Ulla Wollenberger

08:30 to 09:10 **Keynote**

Frieder W. Scheller (Institute of Biochemistry and Biology, University of Potsdam, Potsdam, Germany)

Electrochemistry of Cytochrome C, Microperoxidases and Cytochrome P450 –A Never Ending Story

09:10 to 09:30

Aysu Yarman (University of Potsdam, Potsdam, Germany), Bettina Neumann, Nenad Gajovic-Eichelmann, Frieder W. Scheller

Peroxide-dependent Analyte Conversion by Heme, Microperoxidase-11 and Cytochrome c – Analytical Applications and Medical Implications

09:30 to 09:50

Fred Lisdat (Biosystems Technology, Wildau Technical University of Applied Sciences, Wildau, Germany), Roland Ludwig, Lo Gorton, Sven Feifel

Nanoscaled protein architectures on electrodes exploiting the catalytic function of cellobiose dehydrogenase

09:50 to 10:10

Artavazd Badalyan (University of Potsdam, Institute for Biochemistry and Biology, Department of Molecular Enzymology, Potsdam (Golm), Germany), Marlen Dierich, Silke Leimkühler, Ulla Wollenberger

Mechanism of the Mediator-dependent Reaction of Periplasmatic Aldehyde Oxidoreductase from E. Coli and Biosensor for Aromatic Aldehydes

10:10 to 10:30

Coffee Break

10:30 to 11:10 **Keynote**

Julea Butt (School of Chemistry, Norwich, United Kingdom), Myles Cheesman, Sophie Marritt, Justin Bradley, Colin Lockwood, Thomas Lowe, Lars Jeuken, Duncan McMillan

Resolving the Heart of the Action – Spectroelectrochemical Studies of Cytochromes

11:10 to 11:30

Roberto Ortiz (Department of Analytical Chemistry, Biochemistry and Structural Biology, Lund University, Lund, Sweden), Beatrice Zangrilli, Christoph Sygmund, Roland Ludwig, Lo Gorton

Enhanced Glucose Oxidizing Properties of Corynascus Thermophylus Cellobiose Dehydrogenase by Site Directed Mutagenesis

11:30 to 11:50

Renata Bilewicz (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Ewa Nazaruk, Ewa Gorecka

Enzymes and Mediators Hosted in Lipidic Mesophases for the Construction of Biodevices

11:50 to 12:10

Uffe Bjørnholt Jensen (Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus C, Denmark), Duncan Sutherland, Elena Ferapontova

Activation of laccase bioelectrocatalysis of O_2 reduction to H_2O by carbon nanoparticles

12:10 to 12:30

Barbara Palys (Warsaw University, Warsaw, Poland), Piotr Olejnik

Polarization Modulation Infrared Reflection Absorption Spectroscopy for Structure and Activity of Laccase on Modified Gold Electrodes

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Jan Labuda, Jacek Lipkowski

08:30 to 08:50

Marcin Opallo (Institute of Physical Chemistry, Warszawa, Poland), Katarzyna Szot, Anna Celebanska, Dorota Tomaszewska, Magdalena Kundys, Martin Jonsson-Niedziolka

Nanostructured film electrodes prepared from oppositely charged nanoparticles with bioelectrochemical activities

08:50 to 09:10

Lauro Kubota (Department of Analytical Chemistry, Unicamp, Campinas, Brazil), Wilney Santos, Murilo Santhiago, Ines Yoshida

Electrochemical Sensors Based on Imprinted Sol-Gel Materials on the Electrode Surface

09:10 to 09:30 **Invited**

Claire-Marie Pradier (Laboratoire de Réactivité de Surface, Université Pierre et Marie Curie, Paris, France), Souhir Boujday, Vincent Humblot, Jessem Landoulsi

Characterization of Biointerfaces from UHV to liquid phase

09:30 to 09:50

Christine Moustyy (Institut de Chimie de Clermont-Ferrand, ICCF UMR-CNRS 6296 Clermont Université, Université Blaise Pascal, Aubière, France), Franck Charmentray, Nadia Touisni, Christine Hélaine, Marielle Lemaire, Laurence Hecquet

Electrochemical Biosensing of Sugar-phosphates: An Unusual Galactose Oxidase Coupling with C-C Bond Breaking Enzymes

09:50 to 10:10

Rakefet Ofek Almog (Department of Physical Electronics, School of Electrical Engineering, Faculty of Engineering, Tel Aviv University, Tel Aviv, Israel), Yelena Sverdlov, Sefi Vernick, Yosi Shacham-Diamand

Multilayered Metal/Polypyrrole Electrodes for Biosensors

10:10 to 10:30 Coffee Break

10:30 to 11:10 **Keynote**

Taek Dong Chung (Department of Chemistry, Seoul National University, Seoul, Korea)

Polyelectrolytic Gel Plugs Bridging between Electrochemistry and Microfluidic Chip

11:10 to 11:20

Sabine Kuss (Université du Québec à Montréal, McGill University, Montreal, Canada), Daniel Brassard, Matthias Geissler, Janine Mauzeroll

Assessment of Multidrug Resistance on Cell Co-Culture Patterns Using Biological Scanning Electrochemical Microscopy

11:20 to 11:30

Eléonore Triffaux (Chimie Analytique et Chimie des Interfaces, Faculté des Sciences, Université Libre de Bruxelles, Brussels, Belgium), Thomas Doneux, Dan Bizzotto, Claudine Buess-Herman

Elaboration and Characterisation of a p53 Peptide Aptamer-based Electrochemical Sensor for the Biorecognition of the Protein Mdm2

11:30 to 11:40

Ross Milton (Department of Chemistry, University of Surrey, Guildford, United Kingdom)

Enhanced Direct Electron Transfer in Glucose Oxidation by Glucose Oxidase on a Carbon Nanotube / Cellulose Electrode

11:40 to 11:50

Peter O'Conghaile (Biomolecular Electronics Research Laboratory, School of Chemistry, National University of Ireland, Galway, Ireland), Domhnall Mac Aodha, Brenda Egan, Sirisha Kamireddy, Paul Kavanagh, Dónal Leech

Tailoring surfaces and supports for enzyme mediation, with application to biosensor and biopower device development

11:50 to 12:00

Urszula Salaj-Kosla (Materials and Surface Science Institute, University of Limerick, Limerick, Ireland), Roland Ludwig, Wolfgang Schuhmann, Edmond Magner

Nanoporous gold electrodes as matrices for enzymes immobilization applied in biosensors and biofuel cells

12:00 to 12:10

Sabine Sané (Department of Microsystems Engineering (IMTEK), University of Freiburg, Freiburg, Germany), Stefanie Rubenwolf, Claude Jolivalt, Sven Kerzenmacher

Using fungi to produce electricity- Towards a self-regenerating enzymatic biofuel cell

12:10 to 12:20

Minling Shao (Anal. Chem. – Elektroanalytik & Sensorik, Bochum, Germany), Muhammad Nadeem Zafar, Magnus Falk, Roland Ludwig, Dónal Leech, Miguel Duarte Toscano, Sergey Shleev, Wolfgang Schuhmann, Lo Gorton

Improved Coulombic Efficiency and Power Output of a Glucose/Oxygen Biofuel Cell Based on a Bioanode with Immobilized AmPDH and d-FAD-CtCDH

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Stefan A. Freunberger, Thomas Richardson

08:30 to 08:50 **Invited**

Jun Yang (Department of Chemical Engineering, Shanghai Jiao Tong University, Shanghai, China), Yongsheng Guo, Fan Zhang, Feifei Wang

Boron-based Electrolyte with Wide Electrochemical Window for Rechargeable Magnesium Batteries

08:50 to 09:10

Shahid Rasul (Research Center for Advanced Science and Technology (RCAST), The University of Tokyo, Tokyo, Japan), Shinya Suzuki, Shu Yamaguchi, Masaru Miyayama

Rechargeable Mg-ion batteries: Study of the factors governing the Mg-ion insertion/extraction in Hollandite-MnO_2 electrodes

09:10 to 09:30

Roberto Torresi (Instituto de Química,Universidade de São Paulo, São Paulo, Brazil), Vitor Martins

Electrochemical Behavior of Magnesium in Ionic Liquid

09:30 to 09:50

Michael Schneider (Fraunhofer IKTS Dresden, Dresden, Germany), Ulrike Langklotz, Alexander Michaelis

About the relation between water content and electrochemical behavior of mixed oxide electrodes for lithium ion batteries

09:50 to 10:10

Monalisa Patel (MEET Battery Research Center, Institute of Physical Chemistry, Muenster, Germany), Shahmahmood Obeidi, Alexandra Lex-Balducci, Stefano Passerini, Martin Winter

Polypropylene Separator Treated with Methacrylate-based Polymer for Improved Li-ion Battery Performance

10:10 to 10:30

Coffee Break

10:30 to 10:50

Adam H. Whitehead (Gildemeister Energy Solutions (Cellstrom GmbH), Wiener Neudorf, Austria), Peter Pokorny, Markus Trampert, Martin Schappelwein, Martin Harrer

A Method for the Prevention of Charge Imbalance in the Vanadium Redox Flow Battery

10:50 to 11:10

Leonard Berlouis (University of Strathclyde, Glasgow, United Kingdom), Georgios Nikiforidis, David Hodgson, David Hall

Substrates for the positive electrode reaction in the zinc-cerium hybrid redox flow battery

11:10 to 11:30

Patrick W. Ruch (IBM Research, Zurich Research Laboratory, Rüschlikon, Switzerland), Tobias Rapp, Thomas J. Schmidt, Bruno Michel

Studies of Power Density in Microfluidic Redox Flow Cells

11:30 to 11:50

Jean-Francois Drillet (Karl Winnacker Institute of Dechema e.V., Frankfurt a.M., Germany), Kemal Akca, Alexander Herter, Volkmar Schmidt

Development of a Zinc/Air Battery with a PVA Electrolyte Membrane

11:50 to 12:10

Christine Minke (Institute of Chemical Process Engineering, Clausthal University of Technology, Clausthal-Zellerfeld, Germany), Katrin Harting, Ulrich Kunz, Thomas Turek

Zinc-Air Batteries on an Industrial Scale - Process Engineering Challenges and Economic Evaluation

12:10 to 12:30

Derek Egan (University of Southampton Faculty of Engineering and the Environment, Southampton, United Kingdom), Carlos Ponce-de-Leon, Robert Wood, Richard Jones, Keith Stokes, Frank Walsh

The anodic behaviour of aluminium alloys and the oxygen reduction reactivity of gas diffusion electrodes for a lightweight aluminium-air battery

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Deborah Jones

08:30 to 09:10 **Keynote**

Andrew M. Herring (Chemical and Biological Engineering, Colorado School of Mines, Golden, USA), E. Bryan Coughlin, Daniel M. Knauss, Yushan Yan, Gregory A. Voth, Thomas A. Witten, Matthew W. Liberatore

Understanding Alkaline Exchange Membranes for Fuel Cell Applications

09:10 to 09:30

Lin Zhuang (Department of Chemistry, Wuhan University, Wuhan, China), Jing Pan, Chen Chen, Juntao Lu

Designing advanced alkaline polymer electrolytes for fuel cell applications

09:30 to 09:50

Ruichun Jiang (General Motors LLC, Honeoye Falls, USA), Timothy Fuller, Craig Gittleman

Performance and Durability of Fuel Cell Membranes-based on Perfluorocyclobutane Ionomers

09:50 to 10:10

Sangaraju Shanmugam (Energy Systems Engineering, DGIST, Daegu, Korea), Kriangsak Ketpang

Fabrication of High Temperature Novel Proton Conducting Membranes Based on sPPO Reinforced E-spun Fibers for PEMFCs

10:10 to 10:30

Coffee Break

10:30 to 10:50

Fosca Conti (Research Center of Jülich, Institute of Energy and Climate Research, Jülich, Germany), Anne Majerus, Vito Di Noto, Carsten Korte, Werner Lehnert, Detlef Stolten

Spectroscopic Investigation of Acid-doped Polybenzimidazole as Electrolyte Membrane for Fuel Cells

10:50 to 11:10

Erik Kjeang (School of Engineering Science, Simon Fraser University, Surrey, Canada), Chan Lim, Lida Ghassemzadeh, Tim Peckham, Natalia Macauley, Arash Tavassoli, Ramin Khorasany, Marc-Antoni Goulet, Jeffrey To, Steven Diprose, Mark Cruickshank, Freda Feng, Gary Wang, Nimal Rajapakse, Steven Holdcroft, Mike Lauritzen, Joanna Kolodziej, Mark Watson, Shanna Knights

Membrane Degradation in Heavy Duty Bus Fuel Cells

11:10 to 11:30

Renate Hiesgen (University of Applied Sciences Esslingen, Esslingen, Germany), Stefan Helmly, Ines Galm, Kaspar Andreas Friedrich

Microscopic Analysis of Nafion by AFM - Correlation of Current with Mechanical Properties

11:30 to 11:50

Andrea Boschin (Department of Chemistry and Molecular Biology, University of Gothenburg, Gothenburg, Sweden), Benny Wouters, Xia Sheng, Paolo P. Pescarmona, Ivo F. J. Vankelecom, Annick Hubin, Elisabet Ahlberg

The role of different binders on the electrochemical properties of carbon supported Pt nanoparticles

11:50 to 12:10

Jun Kawaji (Hitachi Research Laboratory, Hitachi, Ltd., Ibaraki, Japan), Shuichi Suzuki, Takaaki Mizukami, Kenji Yamaga

Membrane degradation at cathode edges in MEA for direct methanol fuel cell

12:10 to 12:30

Edson Antonio Ticianelli (Instituto de Química de São Carlos, USP, São Carlos, Brazil), Waldemir J. Paschoalino

Investigation of the Borohydride Oxidation Reaction on La-Ni Based Hydrogen Storage Alloys

Symposium 6: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Quadrant

Chaired by: Alejandro Franco, Kourosh Malek

08:30 to 09:10 **Keynote Invited**

Michael Eikerling (Department of Chemistry, Simon Fraser University, Burnaby, Canada)

High-performance Catalyst Layers for PEM Fuel Cells: From Theory to Advanced Design

09:10 to 09:30

Yoshinori Suzue (Nissan Motor Co., Ltd., Kanagawa, Japan), Alejandro Franco, Tetsuya Mashio, Atsushi Ohma, Kazuhiko Shinohara

Modeling of the Pt/Nafion® Interface in PEMFC Catalyst Layers and Reaction Kinetics by an ab Initio-based Mean Field Approach

09:30 to 09:50

Byungchan Han (Department of Energy Systems Engineering, DGIST, Daegu, Korea), Venkat Viswanathan, Heinz Pitsch

First-Principles Based Analysis of Electrocatalytic Activity of Unreconstructed Pt(100) Surface for Oxygen Reduction Reaction

09:50 to 10:10

Tetsuya Mashio (Advanced Materials Laboratory, Nissan Research Center, Nissan Motor Co., Ltd., Kanagawa, Japan), Kourosh Malek, Michael Eikerling, Atsushi Ohma, Kazuhiko Shinohara

Molecular Dynamics Study of Oxygen Adsorption on a Nafion Thin Film

10:10 to 10:30

Coffee Break

10:30 to 10:50 **Invited**

Adam Weber (Environmental Energy Technologies Division, Berkeley, USA), Prodip Das

Understanding Water Management as a Function of Fuel-cell Catalyst-layer Thickness

10:50 to 11:10

Nicephore Bonnet (National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan), Minoru Otani, Osamu Sugino

Developments of the Effective Screening Medium Method for Modeling Reactions under Bias in the Electrochemical Double Layer from First-Principles

11:10 to 11:30

Perla Balbuena (Department of Chemical Engineering, Texas A&M University, College Station, USA), Rafael Callejas-Tovar, Julibeth Martinez de la Hoz

Surface Oxidation and Dealloying Processes in Fuel Cell Electrodes

11:30 to 11:50

Jürgen Fuhrmann (Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany), Hartmut Langmach, Alexander Linke, Hong Zhao, Mehdi Khodayari, Helmut Baltruschat

Experimental and Numerical Characterization of a Dual Thin-layer Flow Through Cell

11:50 to 12:10

Karen Ka Wing Chan (Department of Chemistry, Simon Fraser University, Burnaby, Canada), Michael Eikerling

Modeling of Ultrathin Catalyst Layers in Polymer Electrolyte Fuel Cells

12:10 to 12:30 **Invited**

David Mitlin (Chemical and Materials Engineering, University of Alberta and National Institute for Nanotechnology, NRC, Edmonton, Canada), Li Zhang, Liya Wang, Chris M. B. Holt, Beniamin Zahiri, Titichai Navessin, Michael H. Eikerling

Highly Corrosion Resistant Platinum - Niobium Oxide - Carbon Nanotube Electrodes for the Oxygen Reduction in PEM Fuel Cells

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Room : Taurus

Chaired by: Stanko Brankovic

08:30 to 09:10 **Keynote**

Sachiko Ono (Department of Applied Chemistry, Faculty of Engineering, Kogakuin University, Tokyo, Japan)

Nano Fabrication of Semiconductor Surface Using Anodic Etching, Anisotropic Chemical Etching and Anodic Oxidation

09:10 to 09:30 **Invited**

Salvatore Piazza (Dipartimento di Ingegneria Chimica Gestionale Informatica Meccanica, Università di Palermo, Palermo, Italy), Rosalinda Inguanta, Germano Ferrara, Carmelo Sunseri

Nanostructures of Lanthanide Oxy/Hydroxides Obtained by Metal Displacement Deposition

09:30 to 09:50

Bishoy M. Morcos (Fab and Process Step RDM, imec, Leuven, Belgium), Aleksandar Radisic, John O'Callaghan, Karen Qian, Mohammed Amira, L. H. A. Leunissen, Chris Van Hoof, Maaike Op de Beeck

Electrodeposition of Platinum Thin Films for Flexible Interconnects in Implantable Medical Devices

09:50 to 10:10

Liang Liu (Institute of Chemistry, The Hebrew University of Jerusalem, Jerusalem, Israel), Daniel Mandler

Electrodeposition of Binary Sol-gel Composite Films: A Method for Preparing Graded Materials

10:10 to 10:30

Coffee Break

10:30 to 11:10 **Keynote**

Tetsuya Osaka (Faculty of Science and Engineering, Waseda University, Tokyo, Japan), Hiroki Nara

Alloy Anode System Fabricated by Electrodeposition for Lithium Secondary Batteries

11:10 to 11:30

Yaw-Chia Yang (Institute of Experimental and Applied Physics, Christian-Albrechts University Kiel, Kiel, Germany), Andriy Taranovskyy Olaf M. Magnussen

Studies of Thiolate-induced Metal Adatom Trapping of Dimethyl Disulfide on Cu(100) by *in-situ* Video STM

11:30 to 11:50

Serhiy Cherevko (Interface Chemistry and Surface Engineering, Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), Angel A. Topalov, Andrea Mingers, Karl J.J. Mayrhofer

Effect of Cathodic Polarization on the Electrochemistry of Gold Surfaces

11:50 to 12:10

Sébastien Devillers (University of Namur, FUNDP CES Laboratory, Namur, Belgium), Quentin Lemineur, Joseph Delhalle, Zineb Mekhalif

Copper Electrodeposition on Nickel: Impact of Induction Heating on Morphology and Crystallinity

12:10 to 12:30

Laurent Bouffier (University of Bordeaux, Institute of Molecular Sciences, Pessac, France), Zahra Fattah, Alexander Kuhn, Gabriel Loget, Dodzi Zigah

Single-point Deposition of Metal Clusters onto Multiscale Carbon Substrates by Bipolar Electrochemistry

Symposium 8: Electroactive Polymeric and Inorganic Materials

Room : Stella

Chaired by: Kim McKelvey, Susana Ines Cordoba de Torresi

08:30 to 09:10 **Keynote**

Magdalena Skompska (Faculty of Chemistry, University of Warszaw, Warsaw, Poland), Mikhail Vorotyntsev

New Strategies of Synthesis of Conducting Polymer-Metal Nanoparticle Hybrid Thin Films

09:10 to 09:30 **Invited**

Ana Mourato (Centro de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal), Luisa M. Abrantes

Electrocatalytic Activity of Conducting Polymer Films modified with Gold and Palladium Particles

09:30 to 09:50

Jean-Claude Moutet (Université Joseph Fourier Grenoble, Grenoble, France), Juan Francisco Rivera

Electrosynthesis and Electrocatalytic Activity of Noble Metal Oxide-Polymer Nanocomposite Films

09:50 to 10:10

Damian Kowalski (Department of Materials Science, Friedrich-Alexander University, Erlangen, Germany), Patrik Schmuki

From nanowires to nanopores – Synthesis of conductingpolymers in self-organized TiO_2 nanotubes

10:10 to 10:30

Coffee Break

10:30 to 11:10 **Keynote**

Daniel Mandler (Institute of Chemistry, The Hebrew University of Jerusalem, Jerusalem, Israel)

Formation, Characterization and Application of Electroactive Materials Assembled by the Langmuir-Blodgett Approach

11:10 to 11:30

Mikolaj Donten (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Marianna Gniadek, Sylwia Malinowska, Zbigniew Stojek

Micro- and nanostructured composite metal-polymer materials obtained at liquid-liquid interphase

11:30 to 11:50

Dihua Wang (Wuhan University, Wuhan, China), Lili Gao, Min Li, Hua Zhu

Conductive Polymer Films Growing along Oil/Water Interface under Electrochemical Polarization

11:50 to 12:10

Gunther Wittstock (Department of Pure and Applied Chemistry, Center of Interface Science, Faculty of Mathematics and Natural Sciences, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany), Ushula Tefashe, Ina Schmidt, Kazuteru Nonomura, Nikolaos Vlachopoulos, Anders Hagfeldt

Dye Regeneration Kinetics in Dye Sensitized Solar Cells Studied by Scanning Electrochemical Microscopy

12:10 to 12:30 **Invited**

Klaus-Michael Mangold (DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany), Claudia Weidlich, Jürgen Schuster

Modified membranes with electrochemical tunable properties

Symposium 9: Corrosion Science and Engineering

Room : Kepler

Chaired by: Philippe Marcus

08:30 to 09:10 **Keynote**

Digby Macdonald (Department of Materials Science and Engineering, Pennsylvania State University, University Park, USA)

Some Interesting Aspects of Passivity Breakdown

09:10 to 09:30 **Invited**

Achim Walter Hassel (Institute for Chemical Technology of Inorganic Materials, Johannes Kepler University, Linz, Austria)

Advanced Scanning Droplet Cells

09:30 to 09:50

Philippe Marcus (Laboratory of Physical Chemistry of Surfaces, CNRS-ENSCP, Chimie ParisTech, Paris, France), Toni Massoud, Vincent Maurice

Nanoscale Investigation of the Electronic Properties of Passive Films on Nickel Studied by Tunneling Spectroscopy

09:50 to 10:10

Julia Lengsfeld (Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), Jazmin Duarte, Frank Uwe Renner

Impact of crystallization on the passive film of Fe50Cr15Mo14C15B6 amorphous steel

10:10 to 10:30

Coffee Break

10:30 to 10:50 **Invited**

Arjan Mol (Department of Materials Science and Engineering, Corrosion Technology and Electrochemistry, Delft University of Technology, Delft, Netherlands), Yaiza Gonzalez-Garcia, Santiago Garcia, Tony Hughes

Local Electrochemical Evaluation of Self-Healing Anticorrosive Organic Coatings

10:50 to 11:10

Luis Frederico P. Dick (Departamento de Metalurgia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil), Anderson Fraga

Development of Organic Smart Coatings on Steel with Additions of Recycled Steel Scales Containing Fe-Cr and (Fe, Cr,Ni,Mo)-Oxides

11:10 to 11:30

Carla Gouveia-Caridade (Departamento de Quimica, Faculdade de Ciências e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Andreia Romeiro, Christopher Brett

Polyphenazine Films for Corrosion Protection of Copper

11:30 to 11:50

Sannakaisa Virtanen (Institute for Surface Science and Corrosion, University of Erlangen-Nuremberg, Erlangen, Germany), Metehan Can Turhan

Novel Surface Treatments for Mg Alloys for Controlled Corrosion and Biocompatibility

11:50 to 12:10

Noémie Ott (Laboratory for Analytical Chemistry, EMPA - Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland), Alessandra Beni, Patrik Schmutz, Christian Ludwig, Andrea Ulrich

Local, Time-resolved and Element-specific Investigations of Corrosion Processes

12:10 to 12:30

Michiel van Soestbergen (Department of Applied Physics, Eindhoven, Netherlands), Bart Erich, Henk Huinink, Olaf Adan

Inhibition of pH Fronts in Corrosion Cells Due to Cerium

Symposium 10: Electrochemical Process Engineering and Technology

Room : Virgo

Chaired by: Christos Comninellis, Manuel Andres Rodrigo

08:30 to 08:50 **Invited**

Pierre Millet (Université Paris-Sud 11, Orsay, France)

PEM Water Electrolysis: Status, Limitations, Potential & Perspectives

08:50 to 09:10

Richard Hanke-Rauschenbach (Max Planck Institute for Dynamics of Complex Technical Systems, Magdeburg, Germany), Boris Bensmann, Ivonne Karina Pena Arias, Kai Sundmacher

High pressure hydrogen production by means of asymmetric water electrolysis – A realistic option?

09:10 to 09:30

Maniya Aghasibeig (Mechanical and Industrial Engineering, Concordia University, Montreal, Canada), Ali Dolatabadi, Rolf Wuthrich

Development of Nickel-based Active Electrode Coatings by SPS and SPPS Processes for the Hydrogen Evolution Reaction

09:30 to 09:50

Sachio Yoshihara (Department of Advanced Interdisciplinary Sciences, Graduate School of Engineering, Utsunomiya University, Utsunomiya, Japan), Ryu Miyamoto, Daisuke Suzuki, Tomoya Suzuki, Yoshifusa Ishikawa

Newly Developed Electroplated Ni-W-S Alloy Cathode for Alkaline Water Electrolysis

09:50 to 10:10 **Invited**

Gerardine Botte (Center for Electrochemical Engineering Research, Ohio University, Athens, USA)

Electrochemical Technologies for the Production of Hydrogen from Alternative Sources

10:10 to 10:30

Coffee Break

10:30 to 11:10 **Keynote**

Paul Kenis (Chemical & Biomolecular Engineering, University of Illinois at Urbana-Champaign, Urbana, USA), Michael Thorson, Devin Whipple, Huei-Ru Jhong, Karl Sill, Sichao Ma

Electrochemical Conversion of CO_2 into Value-Added Chemicals such as Formic Acid and CO

11:10 to 11:30 **Invited**

Tanja Vidakovic-Koch (Max Planck Institute for Dynamics of Complex Technical Systems, Magdeburg, Germany), Ivan Ivanov, Quynh Nga Do Thi, Miroslava Varničić, Kai Sundmacher

Energy Conversion in Bioelectrochemical Systems

11:30 to 11:50 **Invited**

Keith Scott (Newcastle University, Newcastle upon Tyne, United Kingdom)

Recent Improvements in Alkaline Membrane Fuel Cells and Water Electrolysers

11:50 to 12:10

Geoff Kelsall (Department of Chemical Engineering, Imperial College London, London, United Kingdom), Oluseye Agbede, Klaus Hellgardt

Indirect Carbon-Air Fuel Cells for Reforming Carbonaceous Fuels

12:10 to 12:30

Susanne Brosda (Department of Chemical Engineering, University of Patras, Patras, Greece), Stamatis Souentie, Saranaya Peng-Ont, Piyasan Praserthdam, Constantinos G. Vayenas

Reaction kinetics of the electrochemically promoted C_2H_4 oxidation on Pt/YSZ catalysts

Symposium 11: Intermediates and Mechanisms at a Molecular Level

Room : Aquarius

Chaired by: Bernd Speiser,

08:30 to 09:10 **Keynote**

Christian Amatore (Ecole Normale Supérieure & CNRS Chemistry Department, UMR PASTEUR, Paris, France)

Are "Well Known" Catalytic Mechanisms So Well Known ?

Chaired by: Petr Zuman

09:10 to 09:30

Frederic Gloaguen (UMR 6521, CNRS, Université de Bretagne Occidentale, Brest, France), François Quentel, Laurena Yann

Catalysis of Proton Reduction by Binuclear Iron Complexes with Rigid and Conjugated Bridging Ligands

09:30 to 09:50

Doris Elda Grumelli (Max Planck Institute for Solid State Research, Stuttgart, Germany), Benjamin Wurster, Sebastian Stepanow, Klaus Kern

Two Dimensional Metal-Organic Complexes on Surface as a Novel Catalytic System for Energy Conversion

09:50 to 10:10

Christian Durante (Department of Chemical Sciences, University of Padova, Padova, Italy), BinBin Huang, Abdirisak Amhed Isse, Armando Gennaro

Copper Electrodes: New Perspectives in Electrocatalytic Activation of Alkyl Halides

10:10 to 10:30 Coffee Break

Chaired by: Irena Hoskovcová

10:30 to 10:50 **Invited**

Alain Deronzier (Université Joseph Fourier Grenoble, CNRS, Grenoble Cedex 9, France), Marc Bourrez, Florian Molton, Sylvie Chardon-Noblat

Selective $2H^+$, $2e^-$ CO_2 Electroreduction Utilizing a Metal-Carbonyl Complex of Mn, a Naturally Abundant Metal

10:50 to 11:10

Ari Lehtonen (Department of Chemistry, Laboratory of Materials Chemistry and Chemical Analysis, University of Turku, Turku, Finland), Hanna Saarinen, Mikko Hänninen, Pia Damlin

Electrochemical characterization of vanadium-based oxidation catalysts

11:10 to 11:30

Alexey Popov (Leibniz-Institute for Solid State and Materials Research, Dresden, Germany), Ning Chen, Luis Echegoyen, Steven Stevenson, Lothar Dunsch

In Situ ESR Spectroelectrochemistry of Endohedral Oxide Clusterfullerene $Sc_4O_2@C_{80}$

Chaired by: Ana Maria Oliveira-Brett

11:30 to 11:50

Dominique Lucas (Université de Bourgogne, Dijon, France), Abdou Dimé, Charles Devillers

Studies on the Redox Reactivity of Porphine and its Outcomes in Porphyrin Synthesis

11:50 to 12:10

Ana Gabriela Porras-Gutiérrez (UMR CNRS 6521, Université de Brest, Brest, France), Bénédicte Douziech, Jean-Noël Rebilly, Olivia Reinaud, Yves Le Mest

Calix[6]arene-based supramolecular biomimetic copper systems: Electrochemical activation of dioxygen and oxygenase activity

12:10 to 12:30 **Invited**

Petr Zuman (Department of Chemistry, Potsdam, USA), Eliona Kulla, Alan Liška, Jirí Ludvík

How Does Determination of Amino Acids Work? Electroanalytical Study

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Alex Yanson, Piotr Zelenay

08:30 to 09:10 **Alexander Kuznetsov Prize for Theoretical Electrochemistry**

Wolfgang Schmickler (Institute of Theoretical Chemistry, Ulm, Germany), Elizabeth Santos

A Model for Electrocatalytic Reactions

09:10 to 09:30 **Invited**

Shengli Chen (Department of Chemistry, Wuhan University, Wuhan, China), Qianfan Zhang, Junxiang Chen

DFT-based understanding on the hydrogen and oxygen electrode processes on Pt

09:30 to 09:50

Yvonne Pluntke (Institute of Electrochemistry, Ulm, Germany), Ludwig Kibler

Enhanced hydrogen electrocatalysis at Pd monomers and dimers in Cu, Ag and Au hosts

09:50 to 10:10

Alexandr Simonov (Boreskov Institute of Catalysis, Novosibirsk, Russia), Pavel Plyusnin, Pavel Pyrjaev, Yuri Shubin, Boris Moroz, Valerii Bukhtiyarov, Valentin Parmon

What is the Most Efficient in Promoting the Catalytic Activity of Palladium for H_2 Electrooxidation: Gold, Carbon, or a Combination Thereof?

10:10 to 10:30

Coffee Break

10:30 to 10:50

Ladislav Kavan (J. Heyrovsky Institute of Physical Chemistry, Prague 8, Czech Republic)

Graphene Cathode for Co-mediated Dye-sensitized Solar Cells: Outperforming the Electrocatalytic Activity of Pt

10:50 to 11:10

Ioannis Katsounaros (Max-Planck-Institut für Eisenforschung, Department of Interface Chemistry and Surface Engineering, Düsseldorf, Germany), Wolfgang B. Schneider, Josef C. Meier, Udo Benedikt, P. Ulrich Biedermann, Alexander A. Auer, Karl J.J. Mayrhofer

Hydrogen Peroxide Electrochemistry on Platinum: Towards Understanding the ORR Mechanism

11:10 to 11:30

Orawan Winther-Jensen (School of Chemistry, Monash University, Clayton, Australia), Bjorn Winther-Jensen, Douglas MacFarlane

Photostimulated Electrocatalysis of Water Oxidation by Conjugated Polymers

11:30 to 11:50

Yan Xia Chen (Department of Chemical Physics, University of Science and Technology of China, Hefei, China), Ming Fang Li, Ling Wen Liao, DaoFu Yuan, YongLi Zheng

Mechanism of Oxygen Electro-reduction Reaction at Pt Electrode, Implications from pH Effects

11:50 to 12:10

Juan M. Feliu (Instituto de Electroquímica, Universidad de Alicante, Alicante, Spain), Ana M. Gómez-Marín

Role of the surface oxides of Pt(111) as intermediates in the oxygen reduction reaction

12:10 to 12:30

Patricia Hernandez-Fernandez (CINF, Department of Physics, Technical University of Denmark (DTU), Kgs. Lyngby, Denmark), Francisco J. Perez-Alonso, David N. McCarthy, Anders Nierhoff, Christian Strebel, Ifan E.L. Stephens, Jane H. Nielsen, Ib Chorkendorff

The effect of size and Nafion on the oxygen reduction activity of mass-selected Pt nanoparticles

Thursday, 23 August 2012 - Morning

Plenary

Room : Meridian

Chaired by: Elisabet Ahlberg

08:30 to 09:30

Katharina Krischer (Department of Physics, Nonequilibrium Chemical Physics, München, Germany)

Cooperative Phenomena at the Electrified Interface

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Room : Leo

Chaired by: Elena E. Ferapontova, Michael Hill

09:40 to 10:20 **Keynote**

Alan Bond (School of Chemistry, Monash University, Clayton, Australia)

Enhanced Insights into the Electrochemistry of Surface Confined Metallo-Proteins and -Enzymes Using Large Amplitude Fourier Transformed AC Voltammetry

10:20 to 10:40

Coffee Break

10:40 to 11:00

Quynh Nga Do Thi (Max-Planck-Institute, Dynamics of Complex Technical Systems, Magdeburg, Germany), Miroslava Varničić, Tanja Vidaković-Koch, Kai Sundmacher

Application of Electrochemical Impedance Spectroscopy for Studying of Redox Enzyme Kinetics

11:00 to 11:20

Rebeca Miranda-Castro (Laboratioire d'Electrochimie Moléculaire, UMR, CNRS-P7 7591 Université Paris Diderot, Paris, France), Fabien Durand, Benoît Limoges, Nicolas Mano, François Mavré, Jean Michel Savéant

Electrochemical Characterization of the Mechanism of PQQ-dependent Glucose Dehydrogenase as an Indispensable Step for the Rational Design of New Bioelectroanalytical Methods

11:20 to 11:40

Jose Luis Olloqui-Sariego (Department of Physical Chemistry, University of Seville, Sevilla, Spain), Estrella Frutos-Beltrán, Emilio Roldán, Miguel Ángel De la Rosa, Juan José Calvente, Antonio Díaz-Quintana, Rafael Andreu

Voltammetric Study of Thermal Stability of Thermophilic Plastocyanin

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: From Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Jiri Barek

10:40 to 11:00 **Invited**

Xing-Hua Xia (School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China), Hong-Li Gao, Kang Wang, Jing-Juan Xu, Hong-Yuan Chen

Nanochannels array-based devices for bioanalysis

11:00 to 11:20

Fernando Cortes Salazar (Laboratoire d'Electrochimie et Physique Analytique, Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland), Siham Beggah, Jan R. van der Meer, Hubert H. Girault

Electrochemical Read-Out of Cell Based Biochip Sensors for as(III) Monitoring in Tap Water

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Won-Sub Yoon

10:40 to 11:00

Stefan A. Freunberger (School of Chemistry, University of St. Andrews, St. Andrews, United Kingdom), Yuhui Chen, Zhangquan Peng, Muhammed M. Ottakam Thotiyl, Chunmei Li, Olivier Fontaine, Volker Engels, Peter G. Bruce

Reactions in the Non-aqueous Li-O_2 Battery

11:00 to 11:20

Julien Demeaux (CEA, DAM, Le Ripault, Monts, France), Magaly Caravanier, Hervé Galiano, Daniel Lemordant, Bénédicte Montigny

Cycling Ability of Alkylcarbonate-based Electrolytes in Li/$Li_4Ti_5O_{12}$ & Li/$LiNi_{0.4}Mn_{1.6}O_4$ Lithium Batteries and $Li_4Ti_5O_{12}$/$Li_4Ti_5O_{12}$ & $LiNi_{0.4}Mn_{1.6}O4$/$LiNi_{0.4}Mn_{1.6}O_4$ Symmetric Cells

11:20 to 11:40

Kuan-Zong Fung (Materials Science and Engineering, National Cheng Kung University, Tainan City, Taiwan), Chung-Ta Ni, Chi-Yang Liu, Chih-Ying Shen, Kai-Yun Yang

Structure and Composition Dependence on Stability of Li Solid Electrolytes against Metallic Li

THURSDAY AM

Symposium 4b: Advanced Batteries and Electrochemical Capacitors

Room : Virgo

Chaired by: François Béguin

09:40 to 10:20 **Keynote**

George Z. Chen (Department of Chemical and Environmental Engineering, and Energy and Sustainability Research Division, Faculty of Engineering, University of Nottingham, Nottingham, United Kingdom)

Redox Deposition of Transition Metal Oxides on Nanostructured Carbons for Supercapacitors

10:20 to 10:40

Coffee Break

10:40 to 11:00 **Invited**

Andreas Heather (Department of Chemistry, Dalhousie University, Halifax, Canada), Alicia Oickle

Carbon Oxidation in Aqueous-electrolyte Electrochemical Capacitors

11:00 to 11:20

Volker Presser (Drexel University, Philadelphia, USA), Emilie Perre, Maria Lukatskaya, Bruce Dunn, Yury Gogotsi

Pseudocapacitive Behavior of Hierarchical Porous Carbide-derived Carbon with Integrated Niobium Pentoxide Nanoparticles

11:20 to 11:40

Kenneth Ozoemena (Energy and Processes, Materials Science & Manufacturing, Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa), Joel Lekitima, Charl Jafta, Mkhulu Mathe

Tuning Metallophthalocyanines and Electrolytic Manganese Oxide for Application in Asymmetric Electrochemical Capacitors

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: David Ramaker

10:40 to 11:20 **Keynote**

Claude Lamy (CNRS, GDR PACS Piles à Combustible, Systèmes, Montpellier, France), Stève Baranton, Christophe Coutanceau

The Direct Use of Bio-ethanol in a DEFC vs. its Thermo-chemical Conversion to Hydrogen to Feed a PEMFC

11:20 to 11:40

Iori Shimada (Department of Environment Systems, Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Japan), Yoshito Oshima, Junichiro Otomo

Kinetic Analysis of Ethanol Electro-oxidation Using Proton-Conducting Intermediate Temperature Fuel Cells

Symposium 6: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Quadrant

Chaired by: Michael Eikerling, Adam Weber

09:40 to 10:00 **Invited**

Andrei Kulikovsky (Research Centre Juelich, Juelich, Germany)

Polarization curves, impedance spectra and fuel cell design

10:00 to 10:20

Gaël Maranzana (LEMTA, Lorraine University, CNRS, Vandoeuvre lesNancy, France), Julia Mainka, Jerome Dillet, Olivier Lottin, Sophie Didierjean

Electrochemical Impedance Spectroscopy of PEMFC: Is the low frequency resistance equal to the slope of the polarization curve?

10:20 to 10:40

Coffee Break

10:40 to 11:00

Dieter Froning (Forschungszentrum Jülich GmbH, Jülich, Germany), Jan Brinkmann, Uwe Reimer, Werner Lehnert, Detlef Stolten

D analysis, modeling and simulation of transport processes in fibrous microstructures, using the Lattice Boltzmann method

11:00 to 11:20

Abhishek Nanjundappa (Mechatronic Systems Engineering, Simon Fraser University, Surrey, Canada), Alireza Sadeghi Alavijeh, David Harvey, Erik Kjeang

Characterization of Micro-porous Layer: Experimental Images to Multiscale Multiphysics Modelling

11:20 to 11:40

Luiz Fernando Lopes Oliveira (CEA(Atomic and Alternative Energies Commission), DRT, LITEN, DETH, Laboratory of Components for Fuel Cells and Electrolyzers and of Modeling, Grenoble, France), Christian Jallut, Alejandro A. Franco

Multiscale Modeling Study of the Electrochemical and Transport Mechanisms in PEM Water Electrolyzers

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Room : Taurus

Chaired by: Tetsuya Osaka

09:40 to 10:00

Gero Frisch (Department of Chemistry, University of Leicester, Leicester, United Kingdom), Andrew Abbott, Jennifer Hartley

The Elusive Link Between Redox Behaviour and Speciation in Ionometallurgy

10:00 to 10:20

Tristan Simons (Institute for Frontier Materials, Deakin University, Burwood, Australia), Angel Torriero, Patrick Howlett, Douglas MacFarlane, Maria Forsyth

High current density, efficient cycling of Zn^{2+} in 1-ethyl-3-methylimidazolium dicyanamide ionic liquid: The effect of Zn^{2+} salt and water concentration.

10:20 to 10:40

Coffee Break

10:40 to 11:00

Dongping Zhan (Department of Chemistry, Xiamen University, Xiamen, China), Dezhi Yang, Lianhuan Han, Jie Zhang, Jingchun Jia

Electrochemical Microfabrication

11:00 to 11:20

Alison Downard (Department of Chemistry, MacDiarmid Institute for Advanced Materials and Nanotechnology, University of Canterbury, Christchurch , New Zealand), Andrew Gross, Volker Nock, Matthew Polson, Maan Alkaisi

Surface Grafting at the Interface of Flowing Streams: *In situ* Generation of Aryldiazonium Ions inside Microchannels

11:20 to 11:40

Damien Quinton (Department of Chemistry, Rhodes University, Grahamstown, South Africa), Sophie Griveau, Fethi Bedioui, Tebello Nyokong

Surface Patterning using the Scanning Electrochemical Microscope to Locally Trigger a “Click” Chemistry Reaction

Symposium 8: Electroactive Polymeric and Inorganic Materials

Room : Stella

Chaired by: Christopher Brett, Gunther Wittstock

09:40 to 10:20 **Keynote**

Tom Lindfors (Department of Chemical Engineering, Åbo Akademi University, Process Chemistry Centre, Laboratory of Analytical Chemistry, Turku, Finland), Anna Osterholm, Fredrik Sundfors, Robert Gyurcsanyi, Leo Harju, Ari Ivaska

Application of Electrically Conducting Polymers in Ion-selective Electrodes

10:20 to 10:40

Coffee Break

10:40 to 11:00 **Invited**

Arkady Karyakin (Chemistry Faculty of M.V. Lomonosov Moscow State University, Moscow, Russia), Elena Karyakina

Advanced electrocatalysts for hydrogen peroxide reduction based on nano-scaled arrays and films of transition metal hexacyanoferrates

11:00 to 11:20

Susana Cordoba de Torresi (Instituto de Quimica, Universidade de São Paulo, São Paulo, Brazil), Denis Limache, Vinicius Gonçales, Elaine Pavini

Synthesis and characterization of inorganic/organic hybrid matrix for H_2O_2 detection in medium containing Na^+.

11:20 to 11:40

Vessela Tsakova (Institute of Physical Chemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria), Svetlozar Ivanov, Vladimir Lyutov, Andreas Bund

Synthetic Approaches for the Formation of Pd Nanoparticles - Polyaniline Composite Layers. Electroactivity for Hydrazine Oxidation and Hydrogen Peroxide Reduction

Symposium 9: Corrosion Science and Engineering

Room : Kepler

Chaired by: Achim Walter Hassel

09:40 to 10:20 **Keynote**

Hamilton Neil McMurray (Materials Research Centre Swansea University, Swansea, United Kingdom), Geraint Williams

Atmospheric Corrosion of Magnesium - Containing Galvanized Steel Initiated by Acetic Acid

10:20 to 10:40

Coffee Break

10:40 to 11:00

Stefan Evers (Department of Molecular Structures and Surface Design, Max Planck Institute for Iron Research GmbH, Interface Chemistry and Surface Engineering, Düsseldorf, Germany), Michael Rohwerder, Ceylan Senöz

Investigation of the Interaction Between H_2 and Trap Sites in Duplex Steel by Scanning Kelvin Probe Force Microscopy

11:00 to 11:20

Vincent Vignal (ICB, CNRS, Université de Bourgogne, Dijon, France)

Role of Plastic Deformation on the Passivity and Micro-electrochemical Behaviour of Ti-6Al-4V in the Ringer's Solution

11:20 to 11:40

Claudius A. Laska (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), Sebastian O. Klemm, Karl J. J. Mayrhofer, Myriam Madani, Joost De Strycker

Effect of chloride and carbonate on zinc corrosion investigated by a scanning flow cell system with dynamic electrolyte change

Symposium 11: Intermediates and Mechanisms at a Molecular Level

Room : Aquarius

Chaired by: Eleonora-Mihaela Ungureanu

09:40 to 10:20 **Keynote**

R. Daniel Little (Department of Chemistry & Biochemistry, University of California Santa Barbara, Santa Barbara, USA)

Aspects of Mediated Electron Transfer

10:20 to 10:40

Coffee Break

10:40 to 11:00

Armando Gennaro (Chemical Sciences, Padova, Italy), Nicola Bortolamei, Abdirisak A. Isse, Andrew J. D. Magenau, Krzysztof Matyjaszewski

Atom Transfer Radical Polymerization under Electrochemical Generation of the Active Catalyst

11:00 to 11:20

Christophe Bucher (Département de Chimie Moléculaire, Laboratoire de Chimie Inorganique Rédox, CNRS, Université Joseph Fourier, Grenoble, France), Adriana Iordache, Mircea Oltean, Anne Milet, Eric Saint-Aman, Marius Retegan

Electron-triggered Molecular Motions Involving π-Radicals: Towards Redox Responsive Molecular Tools

11:20 to 11:40

Patrizia Romana Mussini (Dipartimento di Chimica Fisica ed Elettrochimica, Milano, Italy), Elena Longhi, Alberto Bossi, Clara Baldoli, Emanuela Licandro, Stefano Maiorana, Lucia Viglianti

Electrochemistry of push-pull, metal-free benzodithiophene-containing organic dyes for Dye-sensitized Solar Cells

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Daniel Scherson

09:40 to 10:00

Fernanda Juarez (Institute of Theoretical Chemistry, Ulm University, Ulm, Germany), German Soldano, Andres Ruderman, Elizabeth Santos, Wolfgang Schmickler

A New Model for the Hydrogen Evolution Reaction on Silver Electrodes

10:00 to 10:20

Donato Fantauzzi (Institute for Electrochemistry, University of Ulm, Ulm, Germany), Aleix Comas-Vives, Timo Jacob

Theoretical investigation on the initial stages of the nucleation and growth of Pt nano-islands on oxidized kink sites of a n-type H:Si(111) surface

10:20 to 10:40

Coffee Break

10:40 to 11:00

Stephen Price (School of Chemistry, University of Southampton, Southampton, United Kingdom), Jenny Rhodes, Jonathon Speed, Laura Calvillo, Prabalini Kannan, Andrea Russell

Exploring the First Steps in Core–Shell Electrocatalyst Preparation: *In Situ* Characterization of Cu and Pd shells on Supported Au Nanoparticles

11:00 to 11:20

Aicheng Chen (Department of Chemistry, Lakehead University, Thunder Bay, Canada), Min Tian, Monika Malig, Shuai Chen, Guosheng Wu, Sapanbir Thind

Modification and Electrochemical Study of Titanium Dioxide Nanotube Arrays

11:20 to 11:40

Edgar Völker (Chemistry Department University of Liverpool, Liverpool, United Kingdom), Federico J. Williams, Ernesto J. Calvo, Timo Jacob, David J. Schiffrin

O_2 induced Cu surface segregation in Au-Cu alloys

Thursday, 23 August 2012 - Afternoon

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Room : Leo

Chaired by: Chunhai Fan, Ana Maria Oliveira-Brett

14:20 to 15:00 **Keynote**

Emil Paleèek (Institute of Biophysics AS CR, Brno, Czech Republic), Hana Eernocka, Veronika Ostatna, Martin Bartosik, Mojmir Trefulka

Electrochemistry of nucleic acids and proteins. New tools for genomics and biomedicine

15:00 to 15:20

Ana Maria Oliveira-Brett (Departamento de Química, Universidade de Coimbra, Coimbra, Portugal)

Direct Electrochemical Oxidation of Peptide Methionine Sulfoxide Reductase A (MsrA)

15:20 to 15:40

Manuela Rueda (Department of Physical Chemistry, University of Seville, Seville, Spain), Francisco Prieto, Julia Alvarez, Antonio Rodes

Electrochemical and *in-situ* FTIR Spectroscopy Investigations of Adenine and Thymine Coadsorption on Au(111) and Thin-film Gold Electrodes

15:40 to 16:00

François Mavré (Laboratoire d'Electrochimie Moléculaire, UMR 7591 CNRS, Université Paris Diderot, Sorbonne Paris Cité, Paris Cedex 13, France), Lylian Challier, Julie Moreau, Claire Fave, Bernd Schöllhorn, Damien Marchal, Vincent Noel, Benoit Limoges

Aptamers as chiral receptors for enantioselective electrochemical sensors

16:00 to 16:20

Devin Daems (Department of Chemistry, Biomedical Sciences, University of Antwerp, Antwerp, Belgium), Guy Van Camp, Luc J. Nagels

An Aptamer-based Potentiometric Sensor for Dopamine

16:20 to 16:40

Coffee Break

16:40 to 17:00

Petr Skladal (CEITEC MU, Masaryk University, Brno, Czech Republic), Eva Svabenska, Jiri Zeravik, Jan Pribyl, David Kovar

Electrochemical Immunosensors for Detection of Bioagents in Aerosols

17:00 to 17:20

Severino Carlos Oliveira (Departamento de Química, Faculdade de Ciências e Tecnologia, Coimbra, Portugal), Inês Santarino, Ana Maria Oliveira-Brett

Electrochemical Oxidation Mechanism of the AnticancerAntibody Rituximab

17:20 to 17:40

Joanna Juhaniewicz (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Slawomir Sek, Jacek Lipkowski

Studies on Interactions of Melittin with Model Lipid Membranes

17:40 to 18:00

Pawel Krysinski (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Dorota Nieciecka

Partitioning of anthracyclines into biomimetic layers: Electrochemical and spectroscopic studies

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Lauro Kubota, Xing-Hua Xia

14:20 to 14:40

Ulla Wollenberger (Department of Molecular Enzymology, Institute Biochemistry and Biology, University Potsdam, Potsdam-Golm, Germany), Stefano Frasca, Armadine Guiet, Anna Fischer, Yilmaz Aksu, Silke Leimkühler, Matthias Driess

Biosensors Comprising Enzymes Coupled to Conductive 3-D Nanostructures

14:40 to 15:00

Agnieszka Wieckowska (Faculty of Chemistry, University of Warsaw, Warsaw, Poland)

Electrodes Modified with Layered Gold Nanoparticles and Enzyme – Laccase for the Detection of Small Molecules

15:00 to 15:20

Guobao Xu (The State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China), Lianzhe Hu, Shuang Han, Ye Tian, Saima Parveen

Electrochemical Detection of Hydrogen Peroxide as well as Related Enzymes and Substrates Based on Selective Hydrogen Peroxide-mediated Boronate Deprotection

15:20 to 15:40

Nicolas Plumeré (Center for Electrochemical Sciences, CES, Ruhr-Universität Bochum, Bochum, Germany), Jan Clausmeyer, Martin Winkler, Jörg Henig, Bernhard Neuhaus, Wolfgang Schuhmann, Thomas Happe

Redox-Active Dendrimers for Specific Binding and Electronic Contacting of Redox Proteins

15:40 to 16:00

Raphael Kiran (CEA-LIST, Diamond Sensors Laboratory, Gif-sur-Yvette, France), Emmanuel Scorsone, Pascal Mailley, Philippe Bergonzo

Boron-doped Diamond Ultra-microelectrode: Fabrication, Characterization and Applications

16:00 to 16:20

Ana S. Viana (Centro de Quimica e Bioquimica, Faculdade de Ciencias, Universidade de Lisboa, Lisboa, Portugal), Ana I. Matos, Inês Almeida, Yu Niu, Gang Jin, Luisa M. Abrantes

New gold biosensor interfaces with ability to reduce non-specific adsorption

16:20 to 16:40 Coffee Break

16:40 to 17:00 **Invited**

Jacek Lipkowski (Department of Chemistry, University of Guelph, Guelph, Canada), Mansoor Vezvaie, Christa L. Brosseau

SERS studies of a biomimetic membrane supported at a nanocavities patterned Ag

17:00 to 17:20

Stefanie Grützke (Analytische Chemie - Elektroanalytik & Sensorik, Ruhr-Universität Bochum, Bochum, Germany), Magdalena Gebala, Wolfgang Schuhmann

Detection of DNA intercalation at nanostructured surfaces combining electrochemical impedance spectroscopy (EIS) and the surface enhanced Raman scattering (SERS)

17:20 to 17:40

Xochitl Dominguez Benetton (Separation and Conversion Technology, VITO, Flemish Institute for Technological Research, Mol, Belgium), Surajbahn Sevda, Karolien Vanbroekhoven, Yolanda Alvarez Gallego, Deepak Pant

Progress and perspectives on the utilization and analysis of electrochemical impedance spectroscopy for the study of microbial electrochemical systems

17:40 to 18:00

Roman Sheparovych (Siegen University, Nachwuchsforschergruppe Dr. Gilbert Nöll, Fak.IV, Dept. Chemie-Biologie, Organische Chemie, Siegen, Germany), Björn Heidel, Sabine Wenderhold-Reeb, Martin Grininger, Holger Schönherr, Gilbert Nöll

AFM Studies of Binding Affinity of the Dodecin Holocomplex with Redox-active Flavin Ligands

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Stephane Bach, Laurence Hardwick

14:20 to 14:40

Petr Krtil (J. Heyrovsky Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic), Elina Pohjalainen, Idalia Bilecka, Petrykin Valery, Markus Niederberger, Tanja Kallio

Cycleability of the Doped $LiFePO_4$ Based Olivine Electrodes - An *in situ* X-ray Absorption Spectroscopy Study

14:40 to 15:00

Nina Kosova (Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia), Evgeniya Devyatkina, Artem Markov, Ivo Zizak

$LiFePO_4$-$Li_3V_2(PO_4)_3$ Composite Cathode Nanomaterials Synthesized via Mechanochemical Route

15:00 to 15:20

Tetsuro Kobayashi (Toyota Central R&D Labs., Inc., Aichi, Japan), Yasuhito Kondo, Yoshio Ukyo

Extensive Study on the Redox Mechanism of Nickel Hydroxide; Participation of K, Li or Cs ions in the Oxidation of β-type Nickel Hydroxide

15:20 to 15:40

Won-Sub Yoon (Department of Energy Science, Sungkyunkwan University, Suwon, Korea), Donghyuk Jang, Jeongbae Yoon, Kyung-Wan Nam, Hyunchul Kim, Kyung Yoon Chung, Seungdon Choi, Xiao-Qing Yang

The Kinetic Effect on Structural Behavior of Mixed Cathode Materials Studied by Time-resolved X-ray Diffraction Technique

15:40 to 16:00

Yu Ren (National Institute of Clean-and-low-carbon Energy, Beijing, China), Zheng Liu, Frédérique Pourpoint, A. Rob Armstrong, Clare Grey, Peter Bruce

Nanoparticulate TiO_2(B): an anode for Li-ion batteries

16:00 to 16:20

Laurence Hardwick (Department of Chemistry, Stephenson Institute for Renewable Energy, University of Liverpool, Liverpool, United Kingdom), Yu Ren, Valentina Gentili, Sergio Brutti, Peter Bruce

Understanding nano-ionics: lithium insertion into TiO_2

16:20 to 16:40

Coffee Break

16:40 to 17:00

Magali Gauthier (Institut des Matériaux, Jean Rouxel, UMR 6502 CNRS-Université de Nantes, Nantes, France), Julien Danet, Bernard Lestriez, Lionel Roué, Dominique Guyomard, Philippe Moreau

Nanoscale Composition of Si Negative Electrodes during First Delithiation

17:00 to 17:20

Stephane Bach (Institut de Chimie et des Matériaux, Paris-Est, GESMAT, UMR 7182 CNRS, Thiais, France), Eddie Panabière, Nicolas Emery, Jean-Pierre Pereira-Ramos, Patrick Willmann

Li_7MnN_4 : A high performance anode material for Li-ion batteries

17:20 to 17:40

Morihiro Saito (Department of Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe-shi, Japan), Takashi Okubo, Tomoyuki Yamada, Chihiro Yodoya, Akika Kamei, Masato Hirota, Toshio Takenaka, Akimasa Tasaka, Minoru Inaba

Improvement of Negative Electrode Properties of Si Thin Flakes for Lithium ion Batteries

17:40 to 18:00

Dong-Hwa Seo (Department of Materials Science and Engineering, Seoul, Korea)

Polymorphism and Phase Transformations of Li_2FeSiO_4 from First Principles

Symposium 4b: Advanced Batteries and Electrochemical Capacitors

Room : Virgo

Chaired by: Volker Presser

14:00 to 14:40 **Keynote**

François Béguin (ICTE, Poznan University of Technology, Poznan, Poland), Krzyzstof Fic, Krzyzstof Jurewicz, Qamar Abbas, Grzegorz Lota, Qiang Gao, Laurent Demarconnay, Encarnacion Raymundo, Elzbieta Frackowiak

V environment friendly C/C supercapacitors in neutral aqueous media

14:40 to 15:00 **Invited**

Moritz Maximilian Hantel (General Energy Department, Paul Scherrer Institut, Villigen-PSI, Switzerland), Tommy Kaspar, Reinhard Nesper, Alexander Wokaun, Rüdiger Kötz

Partially reduced graphite oxide as electrode material for supercapacitors and Li-capacitors

15:00 to 15:20 **Invited**

Andrea Balducci (MEET, Institute of Physical Chemistry, University of Münster, Münster, Germany), Adrian Brandt, Philipp Isken, Alexandra Lex-Balducci

Adiponitrile-based electrochemical double-layer capacitors

15:20 to 15:40 **Invited**

Masashi Ishikawa (Department of Applied Chemistry, Kansai University, Suita, Japan), Yuka Murakumo, Shigeaki Yamazaki, Masaki Yamagata

Capacitance Enhancement by Interfacial Approaches

15:40 to 16:00 **Invited**

Vanesa Ruiz (Centro de Investigación en Nanociencia y Nanotecnología, CIN2 (CSIC), Bellaterra, Spain), Jullieth Suarez-Guevara, Omar Ayyad, Pedro Gomez-Romero

Organic-Inorganic Hybrid Materials for Supercapacitors

16:00 to 16:20

Benjamin Gray (School of Chemistry, University of Southampton, Southampton, United Kingdom), Andrew Hector, John Owen

Inverse opal MN films for charge storage applications

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Enn Lust (Institute of Chemistry, University of Tartu, Tartu, Estonia), Alar Jänes, Heisi Kurig, Ann Laheäär, Indrek Tallo, Rasmus Palm, Kerli Tõnurist, Thomas Thomberg, Jaanus Eskusson

Electrolyte Solutions and Room Temperature Ionic Liquids for Electrical Double Layer Capacitors

17:00 to 17:20

Dominic Rochefort (Département de Chimie, Université de Montréal, Montréal, Canada), Carlos Castro Ruiz, Wenmu Li, Daniel Bélanger

Ionic Liquid Electrolytes in MnO_2 Electrochemical Capacitors: Protic or Aprotic?

17:20 to 17:40

Susana Vaquero (Institute Imdea Energy, Móstoles, Spain), Jesus Palma, Marc Arlen Anderson, Rebeca Marcilla

Role of textural properties and surface functionalities of carbons in the performance of EDLCs

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Nicolas Alonso-Vante, Peter Strasser

14:20 to 14:40 **ISE Prize for Applied Electrochemistry**

Frederic Maillard (LEPMI-CNRS, Saint Martin d'Hères, France), Laetitia Dubau, Julien Durst, Marian Chatenet, Johan André, Elisabeth Rossinot

Durability of bimetallic alloys in PEMCs: Advances and controversies

14:40 to 15:00

Julien Durst (Grenoble INP, Saint Martin d Heres, France), Frédéric Maillard, Marian Chatenet

Effect of Cations on Fuel-cell Related Reactions in Acidic Media

15:00 to 15:20

Sofia Divane (Department of Chemical Engineering, University of Patras, Patras, Greece), Eftichia Martino, Andreas Gousev, Alexandros Katsaounis, Constantinos G. Vayenas

Triode operation of CO poisoned PEM fuel cells

15:20 to 15:40

Jinsu Ha (Samsung Advanced Institute of Technology, Samsung Electronics, Ltd., Yongin-Si , Korea), Suk-Gi Hong, Jung O. Park, Yoon H. Lee, Chanho Pak, Kyoung H. Choi

Effect of Humidity on Durability of High Temperature PEMFC Anode Catalyst

15:40 to 16:00

Laetitia Dubau (LEPMI-CNRS, Saint Martin d'Hères, France), Zuzhen Zhao, Luis Castanheira, Frédéric Maillard

Evidences of Pt crystallite migration on high surface area carbon supports in the presence of reducing molecules

16:00 to 16:20

Nicolas Alonso-Vante (IC2MP, UMR-CNRS 7285, Poitiers, France), Jiwei M, Aldo Gago

Orientation, CO_2 bubble effect, stability and long-term cycling of a membraneless micro fuel cell

16:20 to 16:40

Coffee Break

16:40 to 17:00

Elena Baranova (Department of Chemical and Biological Engineering, University of Ottawa, Ottawa, Canada), Anis Allagui, Mohamed Oudah, Spyridon Ntais

Ammonia electro-oxidation on nano-sized Pt–Ir and Ni prepared by modified polyol template technique

17:00 to 17:20

Laura Calvillo (School of Chemistry, University of Southampton, Southampton, United Kingdom), Andrea E. Russell

Performance and Stability of Pt-Sn/C and Pt@Sn/C Catalysts for DAFCs

17:20 to 17:40

Keegan Caldwell (Department of Chemistry, George Washington University, Washington DC, USA), David Ramaker, Sebastian Kaserer, Christina Roth

XAS Investigations on Phosphate Poisoning in HT-PEM Fuel Cells

17:40 to 18:00

Katrin Kortsdottir (Applied Electrochemistry, School of Chemical Science and Engineering, KTH, Royal Institute of Technology, Stockholm, Sweden), Carlota Domínguez Fernández, Rakel Wreland Lindström

CO_2 poisoning in the reformate PEM fuel cell? Influence of operation conditions on adsorption on Pt and PtRu catalyst

Symposium 5b: Fuel Cells: Materials, Properties, Performance and Durability

Room : Taurus

Chaired by: Christophe Coutanceau, Tatsuhiro Okada

14:20 to 14:40

Tatsuhiro Okada (Tsukuba Fuel Cell Laboratory, Inc., Tsukuba, Japan)

Non-precious Cathode Catalysts for Fuel Cells Based on Organic Metal Complexes with Concerted Functions

14:40 to 15:00

Jianguo Liu (Department of Materials Science and Engineering, Nanjing University, Nanjing, China)

Preparation and Electrochemical Performance of Nitrogen-doped Graphene for Fuel Cells

15:00 to 15:20

Steven E.F. Kleijn (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Beatriz Serrano Bou, Alex Yanson, Marc Koper

Landing behavior of individually detected nanoparticles

15:20 to 15:40

Shahid Iqbal (Department of Electrochemistry, Institute of Physical and Theoretical Chemistry, University of Bonn, Bonn, Germany), Helmut Baltruschat

Electro-deposition of Se on Rh(111) and its *in situ* STM studies

15:40 to 16:00

Bing Joe Hwang (Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Van Thi Thanh Ho, Chun-Jern Pan, John Rick, Hong-Lung Chou, Wei-Nein Su

Cocatalytic Functionality from Strong Metal Support Interactions between Pt and Novel $Ti_xM_{1-x}O_2$ Supports

16:00 to 16:20

David Ramaker (George Washintgon University, Washington, USA), Keegan Caldwell, Sanjeev Mukerjee, Qingying Jia, Joseph Ziegelbauer

Investigations on High Activity De-alloyed Pt_3Co Cathodic Catalysts using XAS

16:20 to 16:40

Coffee Break

16:40 to 17:00

Christophe Coutanceau (Université de Poitiers, IC2MP, Poitiers, France), Stève Baranton

Synthesis and evaluation of $Ni_{1-x}Co_x/C$ catalysts for the generation of clean hydrogen in an alkaline electrolysis cell

17:00 to 17:20

Sang Hoon Joo (School of Nano-Bioscience & Chemical Engineering, Ulsan National Institute of Science & Technology (UNIST), Ulsan, Korea), Jae Yeong Cheon, Hoi Ri Moon

Transition Metal-Doped Ordered Mesoporous Carbons as Pt-Free Electrocatalysts for Oxygen Reduction Reactions

17:20 to 17:40

Arnau Verdaguer-Casadevall (Department of Physics, Technical University of Denmark (DTU), Kgs. Lyngby, Denmark), Ifan Stephens, Patricia Hernandez-Fernandez, Søren Dahl, Ib Chorkendorff

Does Ammonia Poison Pt in Low Temperature Fuel Cells?

Symposium 6: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Quadrant

Chaired by: Marie-Liesse Doublet, Andrei Kulikovsky

14:20 to 15:00 **Keynote Invited**

Peter Notten (Eindhoven University of Technology, Eindhoven, Netherlands), Dmitry Danilov, Alexander Ledovskikh

From battery modeling to battery management

15:00 to 15:20

Bernard Lestriez (Institut des Matériaux, Jean Rouxel, Université de Nantes, CNRS, France, Nantes cedex 3, France), Kalid Seid, Jean-Claude Badot, Olivier Dubrunfaut, Stéphane Levasseur, Dominique Guyomard

Multiscale electronic transport mechanism and true conductivities in amorphous carbon-$LiFePO_4$ nanocomposites

15:20 to 15:40

Tommy Zavalis (Department of Applied Electrochemistry, School of Chemical Science and Engineering, KTH Royal Institute of Technology, Stockholm, Sweden), Matilda Klett, Maria Kjell, Mårten Behm, Göran Lindbergh

Aging in Lithium-ion Batteries: Experimental and Modeling Investigation

15:40 to 16:00

Timo Danner (German Aerospace Center (DLR), Institute of Technical Thermodynamics, Stuttgart, Germany), Birger Horstmann, Norbert Wagner, Wolfgang Bessler

Modeling of Transport Processes in the Cathode of Aqueous Lithium-Oxygen Batteries

16:00 to 16:20

Mikael Cugnet (INES, CEA, LITEN, Le Bourget-du-Lac, France), Issam Baghdadi, Marion Perrin

Multiphysical model of a cylindrical Li-ion LFP cell

16:20 to 16:40

Coffee Break

16:40 to 17:00 **Invited**

Marie-Liesse Doublet (Institut Charles Gerhardt, CNRS, Université Montpellier 2, Montpellier, France), Anne-Laure Dalverny, Jean-Sébastien Filhol

Interface Electrochemistry in Conversion Materials for Li-Ion Batteries

17:00 to 17:20

Denis Kramer (University of Southampton, Southampton, United Kingdom), Tim Albrecht, Nigel Brandon, Anthony Kucernak

Miscibility of nano-particulate Pt-Au from First Principles

17:20 to 17:40

Jochen Rohrer (Materials Modeling Division, Department of Materials and Geo Sciences, TU Darmstadt, Darmstadt, Germany), Karsten Albe

Lithiation of Si embedded in SiC(N,O) - Structure, energetics and kinetics from first principles

17:40 to 18:00

Arnulf Latz (Fraunhofer Institute for Industrial Mathematics (ITWM), Kaiserslautern, Germany), Jochen Zausch

Thermodynamically derived model and simulation of intercalation for a microscopic transport model of Li-ion batteries

Symposium 8: Electroactive Polymeric and Inorganic Materials

Room : Stella

Chaired by: Arkady Karyakin, Jean-Claude Moutet

14:20 to 14:40

Christopher Brett (Departamento de Quimica, Faculdade de Ciencias e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Ricardo Carvalho, Madalina M. Barsan, Carla Gouveia-Caridade, M. Emilia Ghica

Electroactive Polymer/Carbon Nanotube Modified Electrodes for Application in Sensors and Biosensors

14:40 to 15:00

Maija Blomquist (Laboratory of Analytical Chemistry, Process Chemistry Centre, Åbo Akademi University, Åbo/Turku, Finland), Johan Bobacka, Ari Ivaska, Kalle Levon

Electrochemical Characterization of Functionalized Polyaniline for Biosensor Applications

15:00 to 15:20

Krzysztof R. Noworyta (Department II, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Wlodzimierz Kutner, Channa A. Wijesinghe, Francis D'Souza

Polymer Recognition Films of Zinc Porphyrin Derivatives for Determination of Selected Alkaloids

15:20 to 15:40 **Invited**

Nada Atta (Department of Chemistry, Faculty of Science, Cairo University, Giza, Egypt), Ahmed Galal, Ekram El-Ads

Electrochemistry of some neurotransmitters at organized self-assembled molecules of amino acids and surfactants over gold-nanoparticles and conducting polymer surfaces

15:40 to 16:00

Priyanka (Department of Chemistry, Indian Institute of Technology Bombay, Mumbai, India)

Enhancement of Sensitivity of Conductometric Ammonia Sensor Using TiO_2 In PANI

16:00 to 16:20

Jorge Seminario (Department of Chemical & Engineering Electrical Engineering, Texas A&M University, College Station, USA)

Molecular Materials for Sensing and Electronics

16:20 to 16:40

Coffee Break

16:40 to 17:20 **Keynote**

Andrei Aleshin (Ioffe Physical-Technical Institute, Russian Academy of Sciences, St. Petersburg, Russia)

Electroactive composites containing semiconducting polymers and inorganic nanoparticles for organic electronics applications

17:20 to 17:40

Richard McCreery (National Institute for Nanotechnology, University of Alberta, Edmonton, Canada), Rajesh Kumar, Rajesh Pillai, Nikola Pekas, Lian Shoute

Solid-state Spectroelectrochemistry of Redox-based Molecular Memory Devices

17:40 to 18:00

Francesco Di Franco (Electrochemical Materials Science, Palermo, Italy), Monica Santamaria, Francesco Di Quarto, Roberto Macaluso, Mauro Mosca, Claudio Calì

Photoelectrochemical Polymerization of 3-4 Ethylenedioxythiophene on High k Niobium-Tantalum Mixed Oxides

Symposium 9: Corrosion Science and Engineering

Room : Kepler

Chaired by: Hamilton, Neil McMurray, Bernard Tribollet

14:20 to 14:40 **Invited**

Christine Blanc (Université de Toulouse, CIRIMAT, UPS, CNRS, INPT, Toulouse cedex 04, France)

Development of new tools and application of local characterization techniques to study the intergranular corrosion mechanisms of aluminium alloys

14:40 to 15:00 **Invited**

Shinji Fujimoto (Department of Material and Manufacturing Science, Osaka University, Suita, Osaka, Japan), Yuya Morita, Takashi Ogawa, Masahito Mochizuki, Yoshiki Mikami, Hiroaki Tsuchiya, Whee-Sung Kim

Micro Crystallographical Characterization of Intergranular Stress Corrosion Cracking of Alloy600 in Simulated Primary Water Environment of Pressurized Water Reactor

15:00 to 15:20

Bernard Tribollet (UPR 15, CNRS, UPMC, Paris, France), Sameer Joma, Mamié Sancy, Eliane Sutter, Mai Tran

Corrosion of AA2024 in Confined Medium

15:20 to 15:40

Nadine Pebere (CNRS, Toulouse, France), Wolfgang Prieto, Bernard Tribollet, Vincent Vivier

Electrochemical behaviour of 2024 and 7075 aluminium alloys in a neutral sodium sulphate solution

15:40 to 16:00

Vincent Proton (Université de Toulouse, CIRIMAT, UPS, CNRS, INPT, Toulouse, France), Joël Alexis, Eric Andrieu, Loïc Lacroix, Grégory Odemer, Christine Blanc, Jérôme Delfosse

Corrosion behavior of a weld nugget in an Al-Li 2050 friction stir weld

16:00 to 16:20

Halina Krawiec (AGH University of Science and Technology, Krakow, Poland), Iwona Kot, Janusz Lelito

The use of Electrochemical Microcell Technique to study the corrosion resistance of AZ91as-cast magnesium alloy at the microscale

16:20 to 16:40

Coffee Break

16:40 to 17:00

Mark Orazem (University of Florida, Gainesville, USA), Alok Shankar, Chao Liu (Gilbert)

Application of Mathematical Models for Evaluating Cathodic Protection Strategies for Complex Structures

17:00 to 17:20

Kazuhiro Suga (Tokyo University of Science, Noda, Japan), Koichi Minagawa, Taro Moteki, Ryoma Arimura, Masanori Kikuchi

Corrosion Prediction Based on Fluid Dynamic Properties

17:20 to 17:40

Ehsan Fallahmohammadi (Politecnico di Milano, Dipartimento di Chimica, Materiali ed Ingegneria Chimica "Giulio Natta", Milano, Italy), Fabio Bolzoni, Gabriele Fumagalli, Giorgio Re, Luciano Lazzari

Study on hydrogen permeation in pipeline steels

17:40 to 18:00

Pauline Pearson (CSIRO, Energy Technology, Clayton, Australia), Ashleigh Cousins, Aaron Cottrell, Bradley Duncombe, Paul Feron, Tony Hollenkamp, Sanger Huang, Erik Meuleman

Electrochemical Investigation of Corrosion in CO_2 Capture Plants – Influence of Amines

Symposium 11: Intermediates and Mechanisms at a Molecular Level

Room : Aquarius

Chaired by: Nagahiro Hoshi

14:20 to 14:40 **Invited**

Philippe Hapiot (Sciences Chimiques de Rennes, Université de Rennes, Rennes, France), Jean-Marc Noel, Alina Latus, Corinne Lagrost, Elena Volanschi

Unexpected OH radical production during electrocatalysis of oxygen reduction on platinum surface

14:40 to 15:00

Valentina Bonometti (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milan, Italy), Francesco Sannicolò, Tiziana Benincori, Simona Rizzo, Wlodzimierz Kutner, Krzysztof Noworyta, Patrizia Mussini

Inherent Chirality in Electrochemically Active Molecular Materials: Strategy and Panoramic Overview

15:00 to 15:20

Ludmila Simková (Department of Molecular Electrochemistry, J. Heyrovský Institute of Physical Chemistry ASCR, Prague, Czech Republic)

In situ Spectroelectrochemical Study of 2,2-Dinitroethene-1,1-diamine (FOX-7) in Aprotic Solvents

15:20 to 15:40

Abdirisak Ahmed Isse (Department of Chemical Sciences, University of Padova, Padova, Italy), Nicola Bortolamei, Armando Gennaro

Mechanism of Activation of Atom Transfer Radical Polymerization

15:40 to 16:00

Romana Sokolova (J. Heyrovsky Institute of Physical Chemistry, v.v.i., Prague 8, Czech Republic), Sarka Ramesova, Ilaria Degano

The Oxidation Mechanism of Bioflavonoids

16:00 to 16:20

Koji Nakabayashi (Department of Electronic Chemistry, Tokyo Institute of Technology, Tokyo, Japan), Toshio Fuchigami

Study on the preparation of EDOT monomer nano-emulsion using tandem acoustic emulsification and its application to template electrochemical polymerization

16:20 to 16:40 Coffee Break

Chaired by: Lubomir Pospisil

16:40 to 17:00

Bernd Speiser (Institut für Organische Chemie, Universität Tübingen, Tübingen, Germany), Janina Janisch, Rebekka Klinkhammer, Adrian Ruff

Separation of Two One-electron Transfer Redox Couples in Symmetrical Bisferrocenes

17:00 to 17:20

Fabricia Ferreira (Instituto de Química e Biotecnologia, Universidade Federal de Alagoas, Maceio, Brazil), Camila Vasconcelos, Sabrina Ferreira, Vitor Ferreira, Ana Jersia Araujo, Bruno Cavalcanti, Claudia Pessoa, Raquel Montenegro, Leticia Costa-Lotufo, Marilia Goulart, Fabiane de Abreu

Cytotoxic activities of quinones and electrochemical evaluation of their β-cyclodextrin complexation and oxygen reactivity

17:20 to 17:40

James Y. Becker (Department of Chemistry, Ben-Gurion University, Beer Sheva, Israel)

A Novel Anodic Synthesis of Disilylethanes

17:40 to 18:00

Carlos Frontana (CIDETEQ, Queretaro, Mexico), Didier Omar Fernández-González, Hector Javier Cuevas-Fernández, Ana Isabel Pérez-Jiménez

Intra e intermolecular hydrogen bonding in anthraquinones: Voltammetric and theoretical study

Symposium 13: Physical Electrochemistry: from Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Juan M. Feliu, Christopher Lucas

14:20 to 14:40

Stephen Mailu (Department of Chemistry, University of the Western Cape, Cape Town, South Africa), Priscilla Baker

Facile Synthesis and Characterization of Novel Pd-Au-Ag Nanoclusters and their Application as Electrocatalysts for Ammonia Oxidation

14:40 to 15:00

Gary Attard (School of Chemistry, Cardiff University, Cardiff, United Kingdom), Mujib Ahmed, Jonathan Sharman, Edward Wright

The Electrochemical Behaviour of Model Nafion® Thin Films Adsorbed on Pthkl and Pd/Pthkl

15:00 to 15:20

Christopher Lucas (Department of Physics, University of Liverpool, Liverpool, United Kingdom)

Structure-Function Relationships in Model Electrocatalyst Materials

15:20 to 15:40

Daniel Scherson (Ernest B. Yeager Center for Electrochemical Sciences and Department of Chemistry, Case Western Reserve University, Cleveland, USA), Imre Treufeld, Adriel Jacob Jebaraj, Jing Xu, Denis Martins de Godoi

On-line Electrochemical Mass Spectrometry under Forced Convection

15:40 to 16:00

Alex Yanson (Department of Catalysis and Surface Chemistry, Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)

Controlling the shape and composition of the catalytic nanoparticles prepared by cathodic corrosion – a clean, versatile, facile and a fundamentally different method

16:00 to 16:20

Daniel Abbott (J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Valery Petrykin, Sanjeev Mukerjee, Petr Krtil

Bi-functional Catalysts for Oxygen Electrocatalysis Based on Doped RuO_2 – the Relationship Between Local Structure and Selectivity

16:20 to 16:40

Coffee Break

16:40 to 17:00

Ludwig Kibler (Universität Ulm, Institut für Elektrochemie, Ulm, Germany), Johannes Hermann, Fabian Hartl

Electrochemical Study of Formic Acid on Au(111): The Role of Formate as Adsorbed Intermediate

17:00 to 17:20

Masatoshi Osawa (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Jiyong Joo, Taro Uchida, Angel Cuesta, Marc Koper

Electrocatalytic Oxidation of Formate Ion on Pt: A Combined Electrochemical and SEIRAS Study

17:20 to 17:40

Ana Sofia Varela (CINF, Department of Physics, Technical University of Denmark (DTU), Kgs. Lyngby, Denmark), Alexander S. Bodarenko, Ifan E.L. Stephens, Mohammadreza Karamad, Federico Calle-Vallejo, Francisco J. Perez-Alonso, Lone Bech, Jan Rossmeisl, Ib Chorkendorff

Tuning the electrocatalytic activity of Pt(111) with submonolayer quantities of Cu

17:40 to 18:00

Nebojsa Marinkovic (University of Delaware, Newark, USA), Meng Li, Kotaro Sasaki, Radoslav Adzic

In situ Characterization of Ternary Pt-Rh-SnO_2/C Catalysts for Ethanol Electrooxidation to CO_2

Friday, 24 August 2012 - Morning

Plenary

Room : Meridian

Chaired by: Shigeru Amemiya

08:30 to 09:30

Mark E. Meyerhoff (Department of Chemistry, The University of Michigan, Ann Arbor, USA)

Electrochemical Sensors in Medicine: Meeting Needs for the 21st Century

Symposium 2: Electrochemistry Meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Room : Leo

Chaired by: Renata Bilewicz, Julea Butt

09:40 to 10:20 **Keynote**

Lars Jeuken (Institute of Membrane and Systems, Biology University of Leeds, Leeds, United Kingdom), Duncan McMillan, Sophie Weiss, Nikolaos Daskalakis, Sophie Marritt, Julea Butt

Membrane-modified electrodes to study quinone-converting enzymes

10:20 to 10:40

Coffee Break

10:40 to 11:00

Sarah Horswell (University of Birmingham, Birmingham, United Kingdom), Elena Madrid

Electrochemical and Spectroscopic Studies of Phospholipid Layers Supported on Au(111) Surfaces

11:00 to 11:20

Carole Baffert (Laboratory of Bioenergetics and Engineering of Proteins, Marseille, France), Thomas Lautier, Kateryna Sybirna, Isabelle Meynial-Salles, Herve Bottin, Philippe Soucaille, Christophe Leger

Covalent attachment of FeFe hydrogenase to graphite electrode and studies of the catalytic cycle

11:20 to 11:40

Woonsup Shin (Department of Chemistry and Interdisciplinary Program of Integrated Biotechnology, Sogang University, Seoul, Korea)

Toward Lowering Overvoltage of Electrochemical Reduction of Carbon Dioxide

11:40 to 12:00

Olaf Rüdiger (Max Planck Institute for Bioinorganic Chemistry, Mülheim an der Ruhr, Germany), Diego Millo, Antonio De Lacey, Ingo Zebger, Peter Hildebrandt, Wolfgang Lubitz

Spectroelectrochemical Study of the Irreversible Damage of Oxygen Sensitive Hydrogenases Caused by O_2

12:00 to 12:20

Dirk Holtmann (DECHEMA, Research Insitute, Frankfurt, Germany), Thomas Krieg, Anders O. Magnusson, Svenja Kochius, Frank Walter Ströhle, Sevil Zengin Cekic, Claudia Ley, Jens Schrader

Electro-enzymatic processes

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: from Biosensors to Biofuel Cells

Room : Nadir

Chaired by: Alexander Kuhn

10:40 to 11:00

Serban Peteu (The National Institute for Research & Development in Chemistry, Bucharest, Romania), Raluca Oprea, Tiyash Bose, Rabah Boukherroub, Sabine Szunerits, Mekki Bayachou

Recent Advances in Peroxynitrite Detection

11:00 to 11:20

Ana-Maria Chiorcea-Paquim (Departamento de Quimica, Faculdade de Ciências e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Paulina Viegas Festas Santos, Ramon Eritja, Ana Maria Oliveira-Brett

Atomic force microscopy and voltammetric characterisation of quadruplex formation in guanine-containing oligodeoxynucleotides

11:20 to 11:40

Emma Wright (Department of Chemistry, University of Southampton, Southampton, United Kingdom)

Covalent binding of Proteins to Electrodes *via* a Cysteine Residue – A Synthetic Approach

11:40 to 12:00

Anna Nowicka (Department of Chemistry, University of Warsaw, Warsaw, Poland), Agata Kowalczyk, Michal Bystrzejewski, Mikolaj Donten, Zbigniew Stojek

Carbon-encapsulated iron nanoparticles used to generate magnetic field and to enhance substrate transport at electrode surface

Symposium 4a: Advanced Batteries and Electrochemical Capacitors

Room : Meridian

Chaired by: Jun Yang

10:40 to 11:00

Tsutomu Takamura (Department of Applied Chemistry, Harbin Institute of Technology, Yokohama, Japan), Shigeki Matsuda, Kyoichi Sekine

Improvement of Li Insertion Cycle-life of Thick Film of Si on Cu Substrate by Making a Si/Ag Layer by Layer Structure

11:00 to 11:20

Shulei Chou (University of Wollongong, Wollongong, Australia), Shi-Xue Dou, Hua-Kun Liu

$Li_4Ti_5O_{12}$ Microspheres: Fast Synthesis and Binder Effectas Anode Materials for Lithium-ion Battery

11:20 to 11:40

Vitor Martins (Instituto de Química, Universidade de São Paulo, São Paulo, Brazil), Bruno Nicolau, Mauro Ribeiro, Roberto Torresi

Water Effect on Ionic Liquids Transport Properties

11:40 to 12:00

Aaron Fisher (Department of Chemical and Biomolecular Engineering, University of Maryland, College Park, USA), Mian Khalid, Peter Kofinas

Block Copolymer Electrolytes with Sulfur-based Ionic Liquids for Lithium Batteries

12:00 to 12:20

Andrzej Czerwinski (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Szymon Obrebowski, Zbigniew Rogulski

New High-energetic Lead-acid Battery

Symposium 4b: Advanced Batteries and Electrochemical Capacitors

Room : Virgo

Chaired by: Enn Lust

09:40 to 10:00

Kwang-Bum Kim (Department of Material Science and Engineering, Yonsei University, Seoul, Korea), Seung-Beom Yoon, Kwang-Heon Kim

A Study on the Effect of Poly(3,4-ethylenedioxythiophene) (PEDOT) on the Electrochemical Properties of PEDOT/Manganese Oxide/Multiwall Carbon Nanotube Ternary Coaxial Composites for Electrochemical Capacitors

10:00 to 10:20

Magdalena Skunik (Department of Chemistry, Univeristy of Warsaw, Warsaw, Poland), Katarzyna Grzejszczyk, Nick Vlachopoulos, Lei Yang, Leif Häggman, Anders Hagfeldt, Pawel J. Kulesza

Solar energy storage in coupled dye sensitized cell - Electrochemical supercapacitor systems

10:20 to 10:40

Coffee Break

10:40 to 11:00

Shinichi Komaba (Tokyo University of Science, Tokyo, Japan), Masataka Tomita, Naoaki Yabuuchi

New Insight on Large Capacitance of MnO_2 in Magnesium-containing Aqueous Electrolyte for Supercapacitors

11:00 to 11:20

Claudia Ramirez-Castro (Institut des Matériaux Jean Rouxel, UMR CNRS 6502, Université de Nantes, Nantes, France), Olivier Crosnier, Laurence Athouel, Alban Morel, Daniel Bélanger, Thierry Brousse

Improving the Electrochemical Performance of MnO_2/C Nanocomposites by Chemical Grafting

11:20 to 11:40

Elzbieta Frackowiak (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), Krzysztof Fic, Mikolaj Meller, Grzegorz Lota

Quinone-based Redox Active Electrolytes for Supercapacitor Application

11:40 to 12:00

Laurent Pilon (Department of Mechanical and Aerospace Engineering, University of California, Los Angeles, USA), Hainan Wang

Simulation of Cyclic Voltammetry for Redox Reactions Coupled with Electric Double Layers

12:00 to 12:20

Fleur Thissandier (CEA, Grenoble, INAC, SPrAM (UMR5819 (CEA/CNRS/UJF))/ LEMOH, Grenoble, France), Emmanuel Hadji, Gérard Bidan, Thierry Brousse, Pascal Gentile, Saïd Sadki

Silicon nanowires based electrodes for Micro-supercapacitors applications

Symposium 5a: Fuel Cells: Materials, Properties, Performance and Durability

Room : Zenit

Chaired by: Edson Antonio Ticianelli

10:40 to 11:00

Evelina Slavcheva (Institute of Electrochemistry and Energy Systems, Bulgarian Academy of Sciences, Sofia, Bulgaria), Gerald Ganske, Cristian Koch, Uwe Schnakenberg

Thin Pt-Ir Films as Bi-Functional Catalysts for Chip Integrated Hydrogen Microenergy System

11:00 to 11:20

Irene Merino Jimenez (Department of Electrochemical Engineering, Energy Technology Research Group/ University of Southampton, Southampton, United Kingdom), Carlos Ponce de Leon, Frank Walsh

Improvement in the Fuel Efficiency of Direct Borohydride Fuel Cells due to the Presence of Surfactants

11:20 to 11:40

Ryohei Mori (Fuji Pigment Co.Ltd, Kawanishi, Japan), Hideki Yoshioka, Atsushi Mineshige, Hiroyuki Mieda, Takahiro Funahashi, Yusuke Daiko, Tetsuo Yazawa

Fabrication of Anode Supported SOFC with Apatite-type Lanthanum Silicate Paste Films

11:40 to 12:00

Atsushi Mineshige (University of Hyogo, Himeji, Japan), Takahiro Funahashi, Hiroyuki Mieda, Yusuke Daiko, Hideki Yoshioka, Tetsuo Yazawa

Optimization of chemical composition for oxyapatite-type lanthanum silicate

12:00 to 12:20

Nastaran Ranjbar Sahraie (Department of Chemistry, Chemical and Materials Engineering Division, Berlin, Germany), Tobias Reier, Peter Strasser

Manganese-iron Non-precious Metal Catalysts for Oxygen Reduction Reaction (ORR) in Alkaline and Acid

Symposium 5b: Fuel Cells: Materials, Properties, Performance and Durability

Room : Taurus

Chaired by: Jakub Jirkovsky, Vladimir Tripkovic

09:40 to 10:00

Jakub Jirkovsky (Materials Science Division, Argonne National Laboratory, Lemont, USA), Michael Busch, Simon Romani, Matej Halasa, Elisabet Ahlberg, Itai Panas, David Schiffrin

Kinetics of Reduction of Oxygen and Hydrogen Peroxide on Au-Pd Nanoalloys

10:00 to 10:20

Minoru Inaba (Department of Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe, Japan), Yuki Kirihata, Etsuko Maki, Yuta Ikehata, Tetsuro Wada, HIdeo Daimon, Akimasa Tasaka

Durability Improvement of Pt(shell)-Au(core) Catalysts for Polymer Electrolyte Fuel Cells

10:20 to 10:40

Coffee Break

10:40 to 11:00

Carmen M. Rangel (Fuel Cells and Hydrogen Unit, LNEG, Lisboa, Portugal), C.O Soares, R.A. Silva, M.D. Carvalho, M.E. Melo Jorge, A. Gomes, M.I. Pereira

The Electrochemical Performance of $LaNiO_3$ Electrodes Doped with Pt-Ru Nanoparticles

11:00 to 11:20

Ivar Kruusenberg (Institute of Chemistry, University of Tartu, Tartu, Estonia), Leonard Matisen, Qurat Shah, Arunachala Nadar Mada Kannan, Kaido Tammeveski

Electrochemical Reduction of Oxygen on Platinum-free Cathode Catalysts for Alkaline Membrane Fuel Cells

11:20 to 11:40

Annett Rabis (Paul Scherrer Institut PSI, Villigen PSI, Switzerland), Emiliana Fabbri, Rüdiger Kötz, Thomas Schmidt

Doped tin oxide as support for Pt-electrocatalysts in PEFCs with improved durability

11:40 to 12:00

Vladimir Tripkovic (Computational Materials Design ApS, Lyngby, Denmark), Frank Abild-Pedersen, Felix Studt, Isotta Cerri, Tetsuo Nagami, Thomas Bligaard, Jan Rossmeisl

Activity and Stability of the Metal Oxide-supported Platinum Overlayers for the Oxygen Reduction Reaction

12:00 to 12:20

Xia Sheng (Centr. vr Oppervlaktechemie & Katalyse, Heverlee, Belgium), Benny Wouters, Andrea Boschin, Heidi Van Parys, Elisabet Ahlberg, Annick Hubin, Ivo F. J. Vankelecom, Paolo Pescarmona

Development of electrocatalysts for the reduction of nitrobenzene

Symposium 6: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Quadrant

Chaired by: Yann Bultel, Alejandro Franco

09:40 to 10:20 **Keynote Invited**

Meng Ni (Building Energy Research Group, Department of Building and Real Estate, Faculty of Construction and Environment, The Hong Kong Polytechnic University, Hong Kong, China)

Electrochemical and Thermal Modeling of Solid Oxide Electrochemical Cells

10:20 to 10:40

Coffee Break

10:40 to 11:00 **Invited**

Kunal Karan (Department of Chemical Engineering, Queen's University, Kingston, Canada)

Modeling and analysis of H_2S poisoning of Ni-YSZ SOFC anodes at different length scales

11:00 to 11:20

Jochen Joos (Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruher Institut für Technologie (KIT), Karlsruhe, Germany), Moses Ender, Thomas Carraro, Andreas Häffelin, André Weber, Ellen Ivers-Tiffée

D FEM models for mixed conducting LSCF cathodes

11:20 to 11:40

J.G. Pharoah (Queen's University, Queen's RMC Fuel Cell Research Centre, Kingston, Canada), Duncan Gawel, Steven B. Beale

Modelling of Transport and Electro-Chemical Kinetics in Solid Oxide Fuel Cell Electrode Microstructures

11:40 to 12:00

Vitaliy Yurkiv (German Aerospace Center, Stuttgart University, Stuttgart, Germany), Wolfgang Bessler

Modeling of Surface Chemistry, Charge Transfer and Transport in LSCF-based Solid Oxide Fuel Cell Cathodes

12:00 to 12:20

Jerome Laurencin (CEA, Liten, Grenoble, France), François Usseglio-Viretta, Gérard Delette, Julie Villanova, Peter Cloetens, Heikki Suhonen, Pierre Bleuet

3D Reconstruction and Microstructure Characterisation of a Ni-8YSZ Electrode for Use in Solid Oxide Fuel Cell or Solid Oxide Electrolysis Cell: Case of the Anode Supported Cell

Symposium 8: Electroactive Polymeric and Inorganic Materials

Room : Stella

Chaired by: James Cox, György Inzelt

09:40 to 10:00

Rudolf Holze (Institut für Chemie, AG Elektrochemie, Technische Universität Chemnitz, Chemnitz, Germany), Felix Dannenberg, Ivana Sedenkova, Nora Younadam

Chemical Degradation of Polyaniline by Reaction with Fenton's Reagent – A Spectroelectrochemical Study

10:00 to 10:20

Toribio Otero (Universidad Politécnica de Cartagena, Cartagena, Spain), Laura Valero, José Gabriel Martínez

Artificial Muscles Exchanging Anions: Apparent Solvation Index

10:20 to 10:40

Coffee Break

10:40 to 11:00

Miguel A. González-Fuentes (Departamento de Química del Centro de Investigación y de Estudios Avanzados del IPN, Mexico, Mexico), Lindsay S. Hernández-Muñoz, Blanca R Díaz-Sánchez

Radical Grafting of Carbon Surfaces with Ferrocene by Electrochemical Oxidation of Ferrocene-Carboxylate Ions

11:00 to 11:20

Dodzi Zigah (Université de Bordeaux 1, ISM, CNRS, UMR 5255, Pessac, France), Chawanwit Kumsapaya, Gabriel Loget, Laurent Bouffier, Chompunuch Warakulwit, Jumras Limtrakul, Alexander Kuhn

A new method for grafting organic layers on micro-objects

11:20 to 11:40

Bjorn Winther-Jensen (Department of Materials Engineering, Monash University, Clayton, Australia), Vanessa Armel, Chun Ng, Orawan Winther-Jensen, Douglas MacFarlane

Enhanced Electrochemical Reactivity on Conducting Polymer Alloys

11:40 to 12:00

Fernando Scremin (Instituto de Quimica, USP, São Paulo, Brazil), Roberto Torresi

Electrochemical Polymerization of a New Polimerizable Ionic Liquid Based on Aniline in Protic Ionic Liquid

12:00 to 12:20

Qijin Chi (Department of Chemistry, Technical University of Denmark, Kgs. Lyngby, Denmark), Nan Zhu, Jens Ulstrup

Enzyme-like Electrocatalysis of Protein Size Redox Nanoparticles in Two- and Three-dimensional Assemblies

Symposium 9: Corrosion Science and Engineering

Room : Kepler

Chaired by: Mark Orazem

09:40 to 10:00

Eleonora Bettini (KTH Royal Institute of Technology, Division of Surface & Corrosion Science, Stockholm, Sweden)

Influence of Grain Boundary on Dissolution Behavior of Biomedical CoCrMo Alloy: *In-situ* Electrochemical-Optical, AFM and TEM Studies

10:00 to 10:20

Javier Izquierdo (Department of Physical Chemistry, University of La Laguna, La Laguna (Tenerife), Spain), Juan José Santana, Sergio González, Ricardo M. Souto

Scanning Microelectrochemical Characterization of the Anti-corrosion Performance of Inhibitor Films Formed by 2-Mercaptobenzimidazole on Copper

10:20 to 10:40

Coffee Break

10:40 to 11:00

Hercilio G. De Melo (Polytechnic School of the University of Sao Paulo, Sao Paulo, Brazil), Bruno M. Vasconcelos, Vera R. Capelossi, Rocio del P. B. Hernandez, Patricia H. Suegama, Marie-Georges Olivier

Effect of Ce (IV) Ions in the Anticorrosion Properties of Sol-Gel Hybrid Coatings Applied on Al 2024-T3

11:00 to 11:20

Tomas Prosek (Institut de la Corrosion, French Corrosion Institute, Brest, France), Jan Stoulil, Andrej Nazarov, Dan Persson, Dominique Thierry

Composition and Electrochemical Properties of Corrosion Products Formed on Zinc Coatings Alloyed with Magnesium and Aluminum in Model Atmospheric Conditions

11:20 to 11:40

Marianne Seter (ACES, Institute for Frontier Materials, Deakin University, Melbourne, Australia), Maria Forsyth, Bruce Hinton

Understanding Speciation of Rare Earth Cinnamates and Their Impact on the Corrosion Inhibition Mechanism for AS1020 Steel

11:40 to 12:00

Peter Keech (Nuclear Waste Management Organization, Toronto, Canada), Sridhar Ramamurthy, Jian Chen, David Shoesmith

Development and Corrosion Testing of Cold-spray Cu Coatings for Canadian Used Nuclear Fuel Containers

12:00 to 12:20

Annick Hubin (Research Group of Electrochemical and Surface Engineering (SURF), Vrije Universiteit Brussel, Brussels, Belgium), Joost De Strycker, Krista Van Den Bergh, Herman Terryn

Odd Random Phase Multisine Electrochemical Impedance Spectroscopy (ORP-EIS) applied to the corrosion study of Al-rich metallic coated steel.

Symposium 11: Intermediates and Mechanisms at a Molecular Level

Room : Aquarius

Chaired by: Elizabeth Santos

09:40 to 10:20 **Keynote**

Siegfried R. Waldvogel (Institute for Organic Chemistry, University of Mainz, Mainz, Germany)

Electroorganic methods to pave the way for sustainable synthesis

10:20 to 10:40

Coffee Break

Chaired by: Jiri Ludvík

10:40 to 11:00

Andrey Mendkovich (N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia), Mikhail Mikhailov, Ludmila Mikhalchenko, Alexander Rusakov, Vadim Gultyai, Mikhail Syroeshkin

N-O and C-C Bond Cleavage in Anion Radicals of Aromatic Compounds

11:00 to 11:20

Tadaharu Ueda (Kochi University, Kochi, Japan), Sousuke Yokoyama, Daisuke Kaneno, Si-Xuan Guo, John Boas, Alan Bond

Elecrochemical Study on Keggin-type Vanadium-centered Polyoxometalates

11:20 to 11:40

Bernd Elsler (Institute for Organic Chemistry, Johannes Gutenberg University, Mainz, Germany), Siegfried R. Waldvogel

Anodic phenol-arene C,C cross-coupling reactions –The important role of protic additives and substitiution patterns of substrates

11:40 to 12:00

Tsuneo Kashiwagi (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Mahito Atobe, Siegfried R. Waldvogel

Anodic phenol coupling reaction using electrochemical microreactor

12:00 to 12:20

Oleksiy Klymenko (Departement de Chimie, Ecole Normale Superieure, Paris, France), Alexander Oleinick, Christian Amatore, Irina Svir

New Software for Computational Electrochemistry

Symposium 13: Physical Electrochemistry: From Fundamentals to Smart Materials and New Catalysts

Room : Tycho

Chaired by: Ludwig Kibler

09:40 to 10:00

Federico Calle-Vallejo (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Marc Koper

Beyond Scaling Relations in Theoretical Electrochemistry

10:00 to 10:20

Hebe de las Mercedes Villullas (Departamento de Físico-Química, Instituto de Química, Universidade Estadual Paulista, UNESP, Araraquara (SP), Brazil), Nathalia Abe Santos, Denis R.M. Godoi

Electronic Effects and CO_2 Production on Methanol Oxidation: A Correlation Unaffected by the Catalyst Preparation Method

10:20 to 10:40

Coffee Break

10:40 to 11:00

Wei-Hua Yang (Department of Chemistry, Xiamen University, Xiamen, China), Hong-Hui Wang, De-Hao Chen

A Novel Pt-PbO_x Nanocomposite Catalyst for Electrocatalytic Oxidation of Ethylene Glycol

11:00 to 11:20

Tamio Ikeshoji (Tohoku University, Sendai, Japan)

Electrode and electrolyte interfaces and reactions: First principles molecular dynamics study

11:20 to 11:40

Hoydoo You (Argonne National Laboratory, Argonne, USA), Vladimir Komanicky, Daniel Hennessy

High CO Electrooxidation Activity on Epitaxial Bilayer Oxide Formed on Platinum Nanofacets

11:40 to 12:00

Germano Tremiliosi-Filho (Instituto de Quimica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos, Brazil), Janaina Fernandes Gomes, Fernanda Batista Castelo de Paula, Luiz Henrique da Silva Gasparotto

Glycerol Electro-Oxidation onto Pt Single Crystals in Acidic Media: The Influence of the Crystalline Surface Orientation

12:00 to 12:20

Zhi-You Zhou (Department of Chemistry, Xiamen University, Xiamen, China), Jian-Long Lin, Jie Ren, Na Tian, Shi-Gang Sun

In situ FTIR spectroscopic studies of electrooxidation of ethylene glycol on a Pd electrode in alkaline solution

Poster presentation program

Symposium 1: Recent Advances in Electrochemical Instrumentation and Electrodes

Hyphenated instrumentation

s01-001

Flavie Bondu (LISE UPR 15 CNRS, UPMC, Paris, France), Claude Deslouis, Suzanne Joiret, Philippe Rousseau

Dynamic coupling between Raman spectroscopy and double-layer capacitance modulation for small molecules adsorption process

s01-002

Anastasios Economou (Depaprtment of Chemistry, University of Athens, Athens, Greece)

Automated Instrumentation for Coupling Sequential Injection Analysis to Stripping Analysis

s01-003

Akira Kotani (School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan), Xianchun Chen, Hideki Hakamata, Jie Wang, Shouying Du, Fumiyo Kusu

High-sensitive Determination of Redox Components in a Chinese Medicine by Liquid Chromatography with Electrochemical Detection

s01-004

Fumiyo Kusu (School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan), Kouji Takahashi, Mizue Fukano, Saori Yoshida

A Charge-tunable Precolumn for Capillary Liquid Chromatography with Electrochemical Detection

s01-005

Afsaneh Safavi (Department of Chemistry, Shiraz University, Shiraz, Iran)

High Potential Glycine Sensor using α-Ni(OH)2 Nanoparticles Modified Carbon Ionic Liquid Electrode

Integrated electrode/instrument systems and signal processing

s01-006

Luís Marcos Cerdeira Ferreira (Fundamental Chemistry Department, São Paulo University, São Paulo, Brazil), Fabiana S. Felix, Lucio Angnes

BIA-amperometric determination of terbinafine in tablets

s01-007

Orlando Fatibello-Filho (Department of Chemistry, São Carlos Federal University, São Carlos, Brazil), Roberta Medeiros, Bruna Lourenção, Romeu C. Rocha-Filho

Flow-Injection Simultaneous Determination of Synthetic Food Colorants Using a Multiple Pulse Amperometric Detector and a BDD Electrode

s01-008

Aleksander Jaworski (Technic, Inc., Cranston, USA), Hanna Wikiel, Kazimierz Wikiel

An On-line *In-situ* AC-voltammetric Sensor for Electroplating Bath Control – Electroanalysis Using Chemometrically Selected Variables

s01-009

Gerald Kada (Agilent Technologies, Nanoscale Science Division, Vienna, Austria), Matthias Fenner, Fiona Frehill

Monitoring Electrochemical Processes with Sub-nanometer Resolution in a Fully Controlled Environment

s01-010

Juan Claudio Mancilla Gamboa (Department of Organic and Physical Chemistry, Faculty of Chemical and Pharmaceutical Science, University of Chile, Santiago, Chile), Arturo Squella

Determination of Arsenic (III) by differential pulse polarography

s01-011

Marco Villa (Dipartimento Progettazione e Tecnologie, Università di Bergamo, Dalmine, Italy), Stefania Marini, Paolo Nelli, Rachele Pesenti

Programmable power supplies for electrochemistry

s01-012

Rolf Wuthrich (Concordia University, Montreal, Canada), Jana D. Abou Ziki, Maniya Aghasibeig, Andrew Morrison

ECTk – An Open Source Code for Driving Electrochemical Experiments

Micro- and nanoelectrochemical instrumentation

s01-013

Harold Braustein (Biosensors Laboratory, Molecular Microbiology and Biotechnology, The George S. Wise Faculty of Life Science, Tel Aviv University, Tel Aviv, Israel)

Nano- electrochemical Enzyme Solid State Immunoassays to Quantify Analytes in Environmental Health

s01-014

Fernando Cortes Salazar (Laboratoire d'Electrochimie et Physique Analytique, Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland), Carlos M. Pereira, Haiqiang Deng, Pekka Peljo, Kyösti Kontturi, Hubert H. Girault

New Parylene C Coated Microelectrodes for Scanning Electrochemical Microscopy

s01-015

Diego Alfonso Crespo Yapur (Laboratoire des Matériaux, Surfaces et Procédés pour la Catalyse UMR 7515 of CNRS-UdS-ECPM, Strasbourg, France), Elena Savinova, Katharina Krischer, Antoine Bonnefont

Finite size effects and potential oscillations during CO bulk electro-oxidation on coupled Pt microelectrodes

s01-016

Peihua Huang (LAAS, Toulouse, France), Min Heon, David Pech, Magali Brunet, Pierre-Louis Taberna, Patrice Simon, Yury Gogotsi

On-chip Micro-supercapacitors Based on CDC Film

s01-017

Nicole Jaffrezic-Renault (Institute of Analytical Sciences, Claude Bernard University Lyon 1, Villeurbanne, France), Amel Sbartai, Philippe Namour, Abdelhamid Errachid, Jan Krejci, Romana Sejnohová, Louis Renaud, Med Larbi Hamlaoui, Anne-Sophie Loir, Florence Garrelie, Christophe Donnet, Hervé Soder, Eric Audouard, Julien Granier

Determination of WFD metals using new electrochemical BDD film microcells, micromachined with femtosecond laser

s01-018

Izumi Kubo (Graduate School of Engineering, Soka University, Tokyo, Japan)

Screen Printed Gold Electrode for Electrochemical Detection of Bisphenol A in Microchannel

s01-019

Sabine Kuss (Université du Québec a Montréal, McGill University, Montreal, Canada), Christian Kuss, Daniel Brassard, Matthias Geissler, Steen Schougaard, Janine Mauzeroll

Effect of Scanning Speed during Scanning Electrochemical Microscopy Imaging of Live Cells

s01-020

Florence Lagarde (University of Lyon, Institute of Analytical Sciences, Villeurbanne, France), Thanh-Thuy Nguyen-Boisse, Joëlle Saulnier, Nicole Jaffrezic-Renault

Low-cost and highly sensitive L-Lactate conductometric biosensor based on interdigitated gold microelectrodes

s01-021

Andrei Ionut Mardare (Institute for Chemical Technologies of Inorganic Materials, Johannes Kepler University, Linz, Austria), Alfred Ludwig, Alan Savan, Andreas Dirk Wieck, Achim Walter Hassel

High throughput growth and *in-situ* characterization of anodic oxides: Nb-based combinatorial libraries

s01-022

Binoy Paulose Nadappuram (Department of Chemistry, Coventry, United Kingdom), Kim McKelvey, Patrick Unwin

Fabrication and Characterization of Double-barrel Carbon Nanoelectrodes for Redox Titrations at High Spatial Resolution

s01-023

Inka Plettenberg (Department of Pure and Applied Chemistry, CIS- Center of Interface Science, Faculty of Mathematics and Natural Sciences, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany), Gunther Wittstock

Electrochemical Investigation of Surface and Electrolyte Properties with a Two-microelectrode Setup

s01-024

Mara Serrapede (School of Chemistry, University of Southampton, Southampton, United Kingdom), Guy Denuault, Gianluca Pesce, Richard Ball

Nanostructured Palladium Hydride Tips as Passive Probes in SECM Experiments

s01-025

Dmytro Snizhko (Kharkiv National University of Radio Electronics, Kharkiv, Ukraine), Mykola Rozhitskii

The Electrochemical Instrumentation for the Ultra-fast Voltammetry

New electrode materials for electroanalysis

s01-026

Eliane Araújo (Chemistry of Institute, Natal, Brazil), Janiele Almeida, Alexsandro Santos, Carlos Huitle, Nedja Fernandes

Carbon Paste Electrode as Sensor for Identification/Quantification of Folic Acid in Tablets

s01-027

Luís Marcos Cerdeira Ferreira (Department of Fundamental Chemistry, São Paulo University, São Paulo, Brazil), Koiti Araki, Henrique E. Toma, Lucio Angnes

Amino Acids Oxidation Catalyzed by Polymerized Tetraruthenated Nickel-Porphyrin

s01-028

Serdar Cevik (Department of Chemistry, Mugla, Turkey), Suna Timur, Ulku Anyk

A Sensitivite Acetylcholine Biosensor Based on Biocentri-voltammetry

s01-029

Ana Chira (National Institute of Research and Development for Biological Sciences, Centre of Bioanalysis, Bucharest, Romania), Bogdan Bucur, Gabriel Lucian Radu

Use of N-(p-Nitrobenzyl)-4.4'-Dipyridine for Electrodes Modification Based on Diazonium Chemistry

s01-030

Meliha Cubukcu (Department of Chemistry, Ýzmir, Turkey), F. Nil Ertas, Ulku Anyk

GSH Detection with Au-np/Al_2O_3.TiO_2 Modified GCPE

s01-031

Estrella Espada-Bellido (Department of Analytical Chemistry, University of Cádiz, Puerto Real (Cádiz), Spain), Zhaoshun Bi, Constant van den Berg

Determination of chromium in estuarine waters by catalytic cathodic stripping voltammetry using a vibrating mercury coated silver electrode

s01-032

Kensuke Honda (Division of Environmental Science and Engineering, Graduate School of Science and Engineering, Yamaguchi University, Yamaguchi-shi, Japan), Hiroshi Naragino, Kosuke Yoshinaga, Akira Nakahara

Effect of boron incorporation into hydrogenated amorphous carbon films on electrochemical properties

s01-033

Zahra Kamalzadeh (Department of Chemistry, Sharif University of Technology, Tehran, Iran)

Towards electrochemical determination of clozapine based on a MWCNTs/new coccine doped PPY film modified GCE: Multivariate optimization of experimental parameters using factorial-based response surface methodology

s01-034

Yeonji Kwon (Chemistry Education, Seoul National University, Seoul, Korea)

Reduced graphene oxide – Zn/Al layered double hydroxide composite for simultaneous determination of catechol, hydroquinone and resorcinol

s01-035

Abdulkadir Levent (Department of Chemistry, Analytical Chemistry, Batman, Turkey)

Electrochemical determination of melatonin hormone using a boron-doped diamond electrode

s01-036

Janice Limson (Department of Biochemistry, Microbiology and Biotechnology, Rhodes University, Grahamstown, South Africa)

Practical considerations for sensor and biofuel cell technology incorporating carbon nanotubes

s01-037

Danyelle Medeiros de Araújo (Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Elisama Vieira Dos Santos, Marina A. S. Oliveira, Nedja Suely Fernandes, Carlos Alberto Martinez-Huitle

Platinum electrode as sensor for detecting caffeine in real samples

s01-038

Radovan Metelka (Department of Analytical Chemistry, Faculty of Chemical Technology, University of Pardubice, Pardubice, Czech Republic), Pavlína Vlasáková

Preparation and Use of Screen-printed Carbon Electrodes with Porous Copper Layer

s01-039

Tomáš Mikysek (Department of Analytical Chemistry, University of Pardubice, Pardubice, Czech Republic), Matej Stoces, Jirí Ludvík

New Approach to Characterisation of Various Types of Carbon Paste Electrodes

s01-040

Alireza Mohadesi (Department of Chemistry, Payame Noor University, Tehran, Iran)

A New Modified Carbon Nanotube Paste Electrode for Electrochemical Determination of Carbidopa

s01-041

Christine Moustyy (Institut de Chimie de Clermont-Ferrand, ICCF UMR-CNRS 6296 Clermont Université, Université Blaise Pascal, Aubière, France), Joséphine Kamga Wagheu, Claude Forano, Emmanuel Ngameni

Electrochemical Determination of Mesotrione at Organoclay Modified Glassy Carbon Electrodes

s01-042

Jose Maria Palacios-Santander (Department of Analytical Chemistry, Faculty of Science, University of Cadiz, Puerto Real, Spain), Jesus Cabeza-Saucedo, Joaquin Rafael Crespo-Rosa, Ignacio Naranjo-Rodriguez, Jose Luis Hidalgo-Hidalgo De Cisneros, Laura Cubillana-Aguilera

Optimization Study of the New Sonogel-Carbon Nanotubes Material: Electrochemical and Structural Characterization

s01-043

Manuel Palomar-Pardavé (Universidad Autónoma Metropolitana Azcapotzalco, México, Mexico), Jorge Aldana-Gonzalez, Silvia Corona-Avendano, Ma. Guadalupe Montes de Oca, Ma. Teresa Ramírez-Silva, Mario Romero-Romo

Electrochemical Determination of Dopamine in the Presence of Ascorbic and Uric Acid with an ITO Electrode Modified with Gold Nanoparticles in Acid Medium

s01-044

Laura Pigani (Dipartimento di Chimica, Università degli Studi di Modena e Reggio Emilia, Modena, Italy), Alessandro Ulrici, Giorgia Foca, Fabio Terzi, Chiara Zanardi, Barbara Zanfrognini, Renato Seeber

Modified Electrodes and Microelectrodes in an Electronic Tongue for the Analysis of Food Matrices

s01-045

Adriana Remes (Department of Applied Chemistry and Engineering of Inorganic Compounds and Environment, Politehnica University of Timisora, Timisoara, Romania), Anamaria Baciu, Sorina Motoc, Florica Manea, Stephen J. Picken, Joop Schoonman

Multi-walled Carbon Nanotubes Modified With Copper-Benzene-Tricarboxylate (HKUST) Particles for Non-Enzymatic Electrochemical Determination of Glucose

s01-046

Fábio Simões (Institute of Environmental, Chemical and Pharmaceutical Sciences, Federal University of São Paulo - UNIFESP, Diadema, Brazil), Fernanda Palazzo, Lúcia Codognoto

Electrodes Modified with Multiwalled Carbon Nanotubes for Electroanalysis of Paraquat and Diquat Herbicides

s01-047

Alfredina Veiga (University of Évora, Évora, Portugal), José Mirão, António Candeias, Dora Teixeira, Jorge Teixeira

The Carbon Nanotubes Film Coated Electrode as Electrochemical Sensor in Archaeometric Studies

s01-048

Claudia Yañez (Universidad de Chile, Santiago, Chile), Paulina Cañete-Rosales

Modified Glassy Carbon Electrode with Amino-β-Cyclodextrin: Application to the Analysis of Bentazon

s01-049

Tiago Augusto da Silva (University of São Paulo, São Carlos, Botswana), Fernando Moraes, Ivana Cesarino, Sergio Machado

Aligned Single-Walled Carbon Nanotubes on Electrochemical Bisphenol a Determination

Symposium 2: Electrochemistry meets Biology: Fundamental Aspects of Electrochemistry with Biological Systems

Bioelectrocatalysis

s02-001

Milka Avramov Ivic (ICTM, Institute of Electrochemistry, University of Belgrade, Belgrade, Serbia)

Voltammetric and Square-wave Anodic Stripping Determination of Amlodipine Besylate on Gold Electrode

s02-002

Svenja Kochius (DECHEMA, Research Institute, Biochemcial Engineering, Frankfurt, Germany), Jens Schrader, Dirk Holtmann

Testing of immobilized mediators as a tool for electroenzymatic processes

s02-003

Claudia Ley (DECHEMA, Research Institute Biochemical Engineering, Frankfurt, Germany), Jens Schrader, Dirk Holtmann

Screening of a P450 mutein library with an electrochemical microtiter plate

s02-004

Fred Lisdat (Biosystems Technology, Wildau University of Applied Sciences, Wildau, Germany), David Sarauli, Marc Riedel, Christoph Wettstein, Robert Hahn, Konstanze Stiba, Ulla Wollenberger, Silke Leimkühler, Patrik Schmuki

Semimetallic TiO_2 Nanotubes as Interfaces for Bioelectrochemical Enzymatic Catalysis

s02-005

Anders O. Magnusson (Department of Biochemical Engineering, Dechema Research Institute, Frankfurt am Main, Germany), Frank W. Ströhle, Cevil Zengin Cekic, Dirk Holtmann, Jens Schrader

Computational mediator screening to substitute enzyme cofactor with mediated electron transfer

s02-006

Luisa Pilan (Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Bucharest, Romania), Matei Raicopol, Alina Pruna

Glucose Biosensors Based on Functionalized Carbon Nanotubes-Polypyrrole Composites

s02-007

Sladana Strmecki Kos (Ruđer Bošković Institute, Zagreb, Croatia), Marta Plavšic

Adsorptive Transfer Chronopotentiometric Stripping of Sulphated Polysaccharides

s02-008

Hamid R. Zare (Department of Chemistry, Yazd University, Yazd, Iran), Fatemeh Chatraei

Electrodeposited nano-scale islands of ruthenium oxide as a new bed for a study of electrochemical behavior of dopamine in the absence and presence of hydrogen peroxide

s02-009

Iorquirene de Oliveira Matos (Centro de Ciências Naturais e Humana, Universidade Federal do ABC, Santo André, Brazil), Wendel Andrade Alves

Electrocatalytic Activity of a Biomimetic Sensor of Multicopper Oxidases

s02-010

Iorquirene de Oliveira Matos (Centro de Ciências Naturais e Humanas, Universidade Federal do ABC, Santo André, Brazil), Wendel Andrade Alves

The Electronic Properties of Peptide Nanostructures in Electrochemical Measurements

Biosensor design

s02-011

Baohong Liu (Department of Chemistry, Fudan University, Shanghai, China), Kai Guo, Xiaojun Bian, Jie Zhu, Hui Chen, Song Zhang, Jilie Kong

Functional Nanomaterial-based Biosensing Systems for Electroanalysis

Cells at electrodes

s02-012

Pascal Beese (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), Hendrik Venzlaff, Dennis Enning, Karl J.J. Mayrhofer, Friedrich Widdel, Martin Stratmann

Anaerobic microbial influenced corrosion

s02-013

Mihaela Calugareanu (University Politehnica of Bucharest and National Research and Development Institute for Chemistry and Petrochemistry, ICECHIM, Bucharest, Romania), Geza Nagy, Ana Maria Josceanu, Livia Nagy

In Situ Application of Ion Selective Electrodes in Complex Media of Micro Algal Biotechnology

s02-014

Mathieu Etienne (LCPME, CNRS, Villers-lès-Nancy, France), Wissam Ghach, Patrick Billard, Frédéric Jorand, Alain Walcarius

Encapsulation of Micro-organisms in Thin Sol-Gel Films for Environmental Monitoring

s02-015

Maria Gomez-Mingot (Department of Physical Chemistry and Institute of Electrochemistry, University of Alicante, Alicante, Spain), Sophie Griveau, Fethi Bedioui, Jesús Iniesta, Vicente Montiel

Electrochemical Monitoring of ROS and RNS as the Assessment of the Oxidative Stress in Complex Biological Media

s02-016

Eun Joong Kim (Department of Chemistry, Seoul National University, Seoul, Korea)

Patterning Artificially Induced Synapses for Neural Interfaces

s02-017

Mihaela Mindroiu (Faculty of Applied Chemistry and Material Science, University Politehnica Bucharest, Bucharest, Romania), Cristian Pirvu, Ioana Demetrescu

The apatite formation in SBF solution on TiAlNb alloys after surface modification with laser ablation

s02-018

Stefania Rapino (Department of Experimental Oncology, European Institute of Oncology (IEO), Milan, Italy), Raluca Marcu, Massimo Marcaccio, Alice Soldà, Pier Giuseppe Pelicci, Francesco Paolucci, Marco Giorgio

Probing Tumor Redox Unbalance by Scanning Electrochemical Microscopy

s02-019

Andrei Bogdan Stoian (University Politehnica Bucharest, Bucharest, Romania), Daniela Ionita, Mirela Dilea, Anca Mazare, Mihaela Mindroiu, Cristian Pirvu, Camelia Ungureanu

Processing Metallic Implant Alloy for a Better Antibacterial Activity

s02-020

Sven Verguts (Department of Materials and Chemistry, Research Group Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Brussels, Belgium), Yves Van Ingelgem, Erwin Lauwers, Bart Landuyt, Annick Hubin

High throughput cell screening based on advanced electrochemical impedance measurements

s02-021

Wei Xu (Department of Chemistry and Chemical Engineering, Eindhoven University of Technology, Eindhoven, Netherlands), D. Danilov, L. Gao, J.F.M. Oudenhoven, V. Pop, P.H.L. Notten

Mathematic modeling of glucose oxidation: The (electro)catalytic role of the enzyme and mediator

Electrochemistry of nucleic acids

s02-022

Alireza Abi (Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus, Denmark)

Development of Electrochemical DNA Biosensors Based on Hairpin DNA Architectures with Internal Redox Probes

s02-023

Martin Bartosik (Institute of Biophysics, Brno, Czech Republic), Mojmír Trefulka, Emil Palecek

Voltammetric Detection of Osmium(VI)-labeled RNA at Mercury and Carbon Electrodes

s02-024

Mónica Bravo Anaya (Departamento de Ingeniería Química, Universidad de Guadalajara, Guadalajara, Mexico), Erika Roxana Larios-Duran, Emma Rebeca Macias Balleza, Norberto Casillas, Francisco Carvajal Ramos, J.F. Armando Soltero Martinez

Study of the Interface Platinum-DNA/Buffer/H_2O at Different Concentrations and Temperatures by EIS

s02-025

Karolien De Wael (Department of Chemistry, University of Antwerp, Antwerp, Belgium), Sanaz Pilehvar, Freddy Dardenne, Ronny Blust

Electrochemical Aptasensing of Phenicol Antibiotics

s02-026

Michal Fau (Department of Chemistry, University of Warsaw, Warsaw, Poland), Agata Kowalczyk, Piotr Olejnik, Anna Nowicka

Ways of deposition of phenyl layer on gold surface in successful attachment of DNA

s02-027

Gustavo Garbellini (Department of Analytical Chemistry, Institute of Chemistry, São Paulo State University (UNESP), Araraquara, Brazil), Carolina Uliana, Hideko Yamanaka

Immobilization Strategies of ss-DNA onto Boron-doped Diamond Electrode Anodically Pre-treated

s02-028

Magdalena Gebala (Analytische Chemie - Elektroanalytik & Sensorik, Bochum, Germany), Andreas Zimdars, Gerhard Hartwich, Wolfgang Schuhmann

Sandwich microassay for pathogens detection related to urinary tract infections. Selective post-labeling of hybridized 16S rRNAs

s02-029

Stanislav Hason (Institute of Biophysics, Brno, Czech Republic)

Sensitive Label-free DNA Sensing Using Copper-Enhanced Anodic Stripping of Purine Bases at Electrochemically Treated Pencil Graphite Electrodes

s02-030

Marcin Mackiewicz (Department of Chemistry, University of Warsaw, Warsaw, Poland), Beata Krasnodebska-Ostrega, Anna Nowicka

Monitoring of interactions between thallium (I) ions and physiologicaly important DNA sequnces by electrochemical, spectroscopic and gravimetric techniques

s02-031

C. Lorena Manzanares Palenzuela (Sec. Dptal. Química Analítica, Facultad de Farmacia, Universidad Complutense de Madrid, Madrid, Spain), Begoña Martín-Fernandez, Marta Sánchez-Paniagua López, M. Jesus Lobo Castañón, Beatriz López-Ruiz

Electrochemical Genosensor for Indirect Gluten Detection Using Disposable Screen-Printed Gold Electrodes

s02-032

Begoña Martín-Férnandez (Sec. Dptal. Química Analítica. Facultad de Farmacia, Universidad Complutense de Madrid, Madrid, Spain), C. Lorena Manzanares Palenzuela, Marta Sánchez-Paniagua López, M. Jesus Lobo Castañón, Beatriz López-Ruiz

Effect of the enzyme label on a gluten genosensor based in a sandwich hybridization format

s02-033

Mir Fazlollah Mousavi (Department of Chemistry, Tarbiat Modares University, Tehran, Iran), Nasrin Moradi, Masoud A. Mehrgardi

Towards electrochemical single-nucleotide polymorphisms detection by tagging 2,5 dihydroxy benzoic acid as new redox probe

s02-034

Rudolf Navratil (Department of Chemistry, Faculty of Science, Masaryk University, Brno, Czech Republic), Frantisek Jelen, Libuse Trnkova

Comparative Voltammetric Analysis of Some Purine Derivatives on a Pencil Graphite Electrode in the Presence of Copper Ions

s02-035

Iveta Pilarova (Masaryk University, Brno, Czech Republic)

The effect of methanol and ionic strength on the reduction process of 6-benzylaminopurine

s02-036

Libuse Trnkova (Department of Chemistry, Faculty of Science, Masaryk University, Brno, Czech Republic), Frantisek Jelen, Rene Kizek, Vojtech Adam

The discovery, development and future perspectives of elimination voltammetry

s02-037

Carolina Uliana (Department of Analytical Chemistry, São Paulo State University, Araraquara, Brazil), Hideko Yamanaka

Voltammetric Analysis of Flavonoids-DNA Interactions Based on Guanine and Adenine Signals

s02-038

Ewelina Zabost (Department of Chemistry, Warsaw, Poland), Zbigniew Stojek, Sylwia Czarnota, Aleksandra Tomczyszyn, Aleksandra Glowinska, Aleksandra Misicka

Electrochemical and spectroscopic examination of interactions of peptide-tethered Pt (II) complexes with target biomolecules

Electrochemistry of proteins

s02-039

S. Zahra Bathaie (Department of Clinical Biochemistry, Tarbiat Modares University, Tehran, Iran), Ali Hamzehloei, Mir Fazlollah Mousavi

Immobilization of Azurin from Pseudomonas aeruginosa on 6-Mercaptohexanol Self-assembled Monolayer

s02-040

Severino Carlos Bezerra de Oliveira (Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Inês Barreira Santarino, Ana Maria Oliveira-Brett

Anodic Oxidation of the Reducing Agents Dithiothreitol andTris(2-Carboxyethyl)Phosphine at a Glassy Carbon Electrode

s02-041

Mathilde Faure (UPMC and CNRS, Paris, France), Jean Gamby, Claude Deslouis, Bernard Tribollet

Labelling and detection of transthyretin TTR by electrochemistry

s02-042

Elena E. Ferapontova (Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus C, Denmark), Esther Fernandez, Jonas T. Larsson, Andrew W. Munro, Lo Gorton, Claes von Wachenfeldt

Electron Transfer Reactions and Cyanide Binding of Truncated Hemoglobin from Bacillus subtilis

s02-043

Feng Liu (Xiamen University, Xiamen, China), Zhaobin Chen, Jinghong Liang, Jiawei Yan, Bingwei Mao, Jingdong Zhang, Jens Ulstrup

Metal Nanoparticle Enhancement of Electron Transfer through Redox and Non-redox Molecules at Electrodes

s02-044

Raquel Oliveira (Universidade do Minho, Braga, Portugal), Fátima Bento, Dulce Geraldo, João Marcos, João Rodrigues

Electrochemical Generation of Hydroxyl Radicals for Protein Oxidation Studies

s02-045

Christian Rothgängel (University Siegen Fac. IV, Department of Chemistry-Biology, Junior Research Group Dr. Gilbert Nöll, Siegen, Germany), Björn Heidel, Sabine Wenderhold-Reeb, Martin Grininger, Gilbert Nöll

Electrochemical Switching of the Flavoprotein Dodecin on Surfaces Using a Gold Nanoparticle π-Aromatic Wire

s02-046

Qiang Su (University Siegen Fac.IV, Dept. Chemistry-Biology Junior Research Group Dr. Nöll, Siegen, Germany), Björn Heidel, Sabine Wenderhold-Reeb, Martin Grininger, Gilbert Nöll

A Redox-active Rotaxane Configuration on Gold Surfaces for Reconstitution of the Flavoprotein Dodecin

s02-047

Vladimir Vetterl (Institute of Biophysics, Brno, Czech Republic), Stanislav Hason, Raimo Silvennoinen, Ladislav Cvrček, Jiří Vaněk, Sonia Bartáková, Patrik Prachár, Luděk Strašák, Lukáš Fojt

Optical and Electrrochemical Detection of Protein Adsorption at Titanium and Titanium Carbide Surface

s02-048

Stephan Vogt (University of Siegen, Department Chemistry-Biology, Organic Chemistry I, Siegen, Germany)

Spectroelectrochemical Investigation of Glucose Oxidase at Different pH

Electron transfer in proteins and enzymes

s02-049

João Borges (CIQ-L4, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Porto, Portugal), José Campiña, Fernando Silva

Electrochemical Studies on the Adsorption of Bovine β-Lactoglobulin onto a Series of Alkanethiols-Functionalized Au Surfaces

s02-050

Laurent Bouffier (University of Bordeaux, Institute of Molecular Sciences, Pessac, France), Lisa Scullion, Thomas Doneux, David Fernig, Simon Higgins, Donald Bethell, Richard Nichols

pH Controlled Peptide Single Molecule Junctions

s02-051

Adriana Correia (Universidade Federal do Ceara, Fortaleza, Brazil), Francisco Ribeiro, Simone Morais, M. Barroso, S. Viswanathan, Maria Oliveira, Cristina Delerue-Matos

Biosensor for Residue Analysis of Formetanate Hydrochloride Pesticide in Fruits

s02-052

Michaela Eadková (Department of Biological and Biochemical Sciences, Faculty of Chemical Technology, University of Pardubice, Pardubice, Czech Republic), Lucie Korecká, Petr Salek, Radovan Metelka, Zuzana Bilková

Improving the sensitivity of electrochemical immunosensor for protein detection

s02-053

Ioana - Otilia Ghinea (Faculty of Food Science and Engineering, Dunarea de Jos University of Galati, Galati, Romania), Rodica Dinica, Gabriela Bahrim, Geta Carac

Electro-oxidation of New Pyridine Ring Heterocycles on Platinum Electrode in Aqueous Medium

s02-054

Anna Sloniewska (Department of Chemistry, University of Warsaw, Warsaw, Poland), Barbara Palys

Polyaniline Nanotubes and Hydrogels as a Substrate for Urease on Urea Biosensors

s02-055

Agnieszka Swietlikowska (Department of Chemistry, University of Warsaw, Warsaw, Poland), Barbara Palys

Electrocatalityc Activity of Laccase on Electrochemically Deposited Graphene

POSTERS

Fundamentals for biofuel cells

s02-056

Magdalena Blicharska (Department of Chemistry, Warsaw, Poland), Pawel J. Kulesza

Development of hybrid nanostructured gold-containing enzymatic electrodes for glucose oxidation.

s02-057

Harold Braustein (Biosensors Laboratory, Molecular Microbiology and Biotechnology, The George S. Wise Faculty of Life Science, Tel Aviv University, Tel Aviv, Israel)

Bioelectrochemical Boundary Engineering: Near the Fabrication of Electrochemical Biosensors, Biofuel Cells, and Self-powered Logic Nano- biosensors

s02-058

Maciej Karaskiewicz (University of Warsaw, Warsaw, Poland), Ewa Nazaruk, Jan F. Biernat, Kamila Zelechowska, Jerzy Rogalski, Renata Bilewicz

Mediator-free, compartmentless biofuel cell based on laccase bioconjugates and glucose dehydrogenase

Membrane transport phenomena

s02-059

Zbigniew A. Figaszewski (Institute of Chemistry, University in Bialystok, Bialystok, Poland)

Impedance spectroscopic investigation of the bilayers formed from lipid–amino acid systems

s02-060

Dorota Matyszewska (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Renata Bilewicz

Interactions of Carbon Nanotubes as Drug Delivery Systems with Model Thiolipid Layers

s02-061

Monika Naumowicz (Institute of Chemistry, University in Bialystok, Bialystok, Poland)

Chronopotentiometric investigation of the influence of electrolyte composition on lipid bilayer's physicochemical properties

s02-062

Aneta D. Petelska (Institute of Chemistry, University in Bialystok, Bialystok, Poland)

The influence of pH of sphingomyelin monolayer at the air/aqueous solution interface

Symposium 3: Advanced Materials Design for Bioelectrochemical Applications: From Biosensors to Biofuel Cells

Biosensor design

s03-001

Kwang-Soo Ahn (Department of Chemistry, Yonsei University, Seoul, Korea), Won-Yong Lee

Highly sensitive microgravimetric hemoglobin A1c detection based on boronic acid functionalized nanoparticles

s03-002

Masahiro Akiya (Tokyo City University, Tokyo, Japan), Takamichi Hirata, Hideaki Tsushima

Mixed taste discrimination using LB film taste sensor

s03-003

Katarzyna Arkusz (Biomedical Engineering Division, University of Zielona Gora, Zielona Góra, Poland), Agnieszka Kaczmarek, Justyna Skora, Joanna Filik, Karolina Cyran, Elzbieta Krasicka-Cydzik

Impedimetric Biosensor for Breast Cancer Biomarker Based on TiO_2 Nanotube Electrode

s03-004

Rui Barbosa (Center for Neuroscience and Cell Biology and Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal), Ricardo Santos, Marcelo Rodrigues, João Laranjinha

Electrochemical Biosensor Based on Myoglobin/Carbon Nanotubes/Chitosan Composite–Modified Microelectrode for Nitric Oxide Detection in Brain Tissue

s03-005

Dan Ion Caval (Department of Analytical Chemistry and Environmental Engineering, University Politechnica of Bucharest, Bucharest, Romania)

Electrochemical Deposition and Characterization of Conducting Polymers –Tyrosinase Coatings on Gold Microelectrode Arrays by Using Sinusoidal Voltages

s03-006

Ying-Chung Chen (Department of Electrical Engineering, National Sun Yat-Sen University, Kaohsiung, Taiwan)

Investigation of allergy biosensor for human IgE detection using ZnO/ SiN_x/Si Layered SAW Oscillator

s03-007

Cecilia Cristea ("Iuliu Hatieganu" University of Medicine and Pharmacy, Faculty of Pharmacy, Analytical Chemistry Department, Cluj-Napoca, Romania), Anca Florea, Robert Sandulescu

Screen-printed Electrodes Modified with Carbon Nanotubes for the Quantification of Acetaminophen

s03-008

Lívia Flório Sgobbi (Instituto de Química de São Carlos, Universidade de São Paulo, São Carlos, Brazil), Antonio Carlos Bender Burtoloso, Sergio Antonio Spinola Machado

Evaluation of the Potentiality of 4-[(1E)ethanehydrazonoyl]benzoic Acid as a Biomimetic for Acetylthiocholinesterase

s03-009

K. Vengatajalabathy Gobi (Department of Chemistry, National Institute of Technology, Warangal, India), K. Koteshwara Reddy

Electrochemical Sensor for Biomedical Markers Using Molecular Imprinted Polymers

s03-010

Nofar Hemed (Department of Physical Electronics, School of Electrical Engineering, Tel Aviv University, Tel-Aviv, Israel), Alexandra Inberg, Yosi Shacham-Diamand

On the Reliability of Electrolyte-Insulator-Silicon Devices with Self-assembled Monolayer as Gate Insulator

s03-011

Sho Hideshima (Research Institute for Science and Engineering, Waseda University, Tokyo, Japan), Marika Kimura, Ryosuke Sato, Shigeki Kuroiwa, Tetsuya Osaka

Importance of Small Receptor on Allergy Detection Using Field Effect Transistor Biosensor

s03-012

Somayeh Kakhki (Department of Chemistry, University of Isfahan, Isfahan, Iran)

Ultra sensitive detection of cysteine by carbon paste electrode modified with a mixture of Co(II)Salophen and Keggin polyoxometalate ($(n\text{-butyl})_4SiW_{12}O_{40}$)

s03-013

Elena Karyakina (Faculty of Chemistry of M.V. Lomonosov Moscow State University, Moscow, Russia), Eugene Yashina, Marya Komkova, Darya Vokhmyanina, Arkady Karyakin

Improved protocol for enzymes immobilization and developing of nano-scaled layers of biocatalysts for electrochemical biosensors

s03-014

Amir Homayoun Keihan (Nanobiotechnology Research Center, Tehran, Iran), Mahdi Ghaffarisharaf, Sharareh Sajjadi, Hedayatollah Ghourchian

Amperometric Choline Biosensor Based on Choline Oxidase Immobilized on Prussian blue/Carbon Nanotube/Ionic Liquid Hybrid Coated Electrode

s03-015

Dong-Min Kim (Department of Chemistry, Pusan National University, Busan, Korea), Hui-Bog Noh, Yoon-Bo Shim

A selective potentiometric sensor for glucose detection using molecular-imprinting on the conducting polymer

s03-016

Byung Kun Kim (Department of Chemistry, Yonsei University, Seoul, Korea), Won-Yong Lee

Detection of estrogen based on estrogen receptor alpha-immobilized gold electrode by electrochemical impedance spectroscopy

s03-017

Yeng Lee (School of Chemistry, University of New South Wales, Sydney, Australia), J. Justin Gooding, Barbara A. Messerle

Developing Ruthenium-based Redox Labels for Electrochemical Biosensors

s03-018

Cecilia Lete (Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy, Bucharest, Romania)

Development of Conducting Polymer –Tyrosinase Coatings-based Amperometric Sensor

s03-019

Tony Rogério Lima Dadamos (Instituto de Química de São Carlos, Universidade de São Paulo, São Carlos, Brazil), Lívia Flório Sgobbi, Sérgio Antônio Spinola Machado

Development of a Bifunctional Pt/Au Platform Modified With Laccase for Catechol Determination

s03-020

Fred Lisdat (Biosystems Technology, Wildau Technical University of Applied Sciences, Wildau, Germany), Vanessa Schöppler, Constanze Schlachter, Jörn Glökler

Detection of analyte-induced folding of long human telomeric repeats using surface plasmon resonance and quartz crystal microbalance

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Jorge Pavez (Departamento de Quimica de los Materiales, Universidad de Santiago de Chile, Santiago, Chile), Cristián Vera-Oyarce, Carlos P. Silva, Juan F. Silva, Maritza Páez, Miguel Gulppi, Jose H Zagal

Electrochemical synthesis of template assisted large array of vertically aligned functionalized cytochrome c gold nanowires electrode

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Sascha Pöller (Analytische Chemie - Elektroanalytik & Sensorik Ruhr-Universität Bochum, Bochum, Germany), Wolfgang Schuhmann

Stabilizing redox polymer films by electrochemically induced crosslinking

s03-023

Reyhaneh Sadat Saberi (Department of Chemistry, Sharif University of Technology, Tehran, Iran), Zahra Taleat, Saeed Shahrokhian, Mohammad Mazloum-Ardakan, Giovanna Marrazza

Application of Novel Bilayer Modified Graphite Screen Printed Electrode with Polyaniline and Gold Nanoparticle as DNA Biosensor

s03-024

Sharareh Sajjadi (Department of Biology, Roudehen, Iran), Hedayatollah Ghourchian, Amir Homayoun Keihan

Development of an electrochemical biosensor for organophosphate monitoringusing carbon nanotube/ionic liquid modified electrode

s03-025

Alina Sekretareva (Department of Chemistry, M.V. Lomosov Moscow State University, Moscow, Russia), Arkady Karyakin

Reagentless Lactate Biosensor Free of Covalent Mediator Linking

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Viswanathan Subramanian (REQUIMTE, Instituto Superior de Engenharia do Porto, Porto, Portugal), Rani Chinnakkaruppanan, Cristina Delerue-Matos

Molecular imprinted melanin type polymer nanoelectrodes for ultra-sensitive detection of prostate cancer marker

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Maria del Pilar Taboada Sotomayor (Department of Analytical Chemistry, Chemistry Institute of the São Paulo State Uniiversity, Araraquara, Brazil), Maricely Janette Uria Toro

Development of Biosensor for Detection of Hexazinone Based on Extract of Brazilian Açai

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Maria del Pilar Taboada Sotomayor (Department of Analytical Chemistry, Chemistry Institute of the São Paulo State University, Araraquara, Brazil), Marcos Vinicius Foguel, Thiago Martiniano do Prado, Antonio Pupim Ferreira

Development of a third generation biosensor for detection of penicillin

s03-029

Babak Tavana (ZTE Polymer Co., Tehran, Iran)

A new and high selective Molecularly Imprinted Polymer (MIP) based electrochemical sensor for Interfron beta-1b (ZIFERON)

s03-030

Darya Vokhmyanina (Faculty of Material Science, Moscow State University, Moscow, Russia), Alina N. Sekretaryova, Tatiana O. Chulanova, Arkady Karyakin

Reagentless biosensor based on glucose oxidase wired by the mediator freely diffusing in enzyme containing membrane

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Mi-Sook Won (Busan Center, Korea Basic Science Institute, Busan, Korea), Dong-Min Kim, Yoon-Bo Shim

The selective detection of glycated hemoglobin through the catalytic reduction of hydrogen peroxide

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Jing-Juan Xu (Department of Chemistry, Nanjing University, Nanjing, China), Mei-Sheng Wu, Hai-Wei Shi, Li-Jing He, Hong-Yuan Chen

Microchip Device with 64-site Electrode Array for Multiplexed Immunoassay of Cell Surface Antigens based on Electrochemiluminescence Resonance Energy Transfer

s03-033

Jose H. Zagal (Facultad de Quimica y Biologia, Universidad de Santiago de Chile, Santiago, Chile, Chile), Mamie Sancy

Simultaneous electrochemical detection of dopamine, ascorbic acid and uric acid using copper-phthalocyanine functionalized MWCNTs

Design of biofuel cells

s03-034

Letizia Amato (Department of Micro- and Nanotechnology, Technical University of Denmark, Kongens Lyngby, Denmark), Rasmus Jul Hansen, Arto Heiskanen, Stephan Keller, Anja Boisen, Jenny Emnéus

Electrochemical Evaluation of Pyrolyzed High Aspect Ratio 3D Electrodes for Biofuel Cell Applications

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Xochitl Dominguez Benetton (Separation and Conversion Technology VITO - Flemish Institute for Technological Research, Mol, Belgium), Ekin Dalak, Karolien Vanbroekhoven, Deepak Pant

Multiphysics modeling as an efficient tool for design and optimization of microbial-fuel cells

s03-036

Fred Lisdat (Biosystems Technology, Wildau Technical University of Applied Sciences, Wildau, Germany), Ivo Schubart, Gero Göbel

A (PQQ)-GDH-electrode with direct electron transfer based on polyaniline modified carbon nanotubes for biofuel cell application

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Justo Lobato (Department of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain), Araceli González del Campo, Pablo Cañizares, Francisco Fernández, Manuel A. Rodrigo

Electrochemical Study of a Mediator-less MFC with a Cathode Assisted by Algae

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Peter O'Conghaile (Biomolecular Electronics Research Laboratory, School of Chemistry, National University of Ireland, Galway, Ireland), Brenda Egan, Domhnall Mac Aodha, Paul Kavanagh, Dónal Leech

Screening of bioelectrocatalytic components in enzymatic fuel cells

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Robert Sandulescu (Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania), Mircea Anton, Iuliu Ovidiu Marian, Nicolae Dragoº

Immobilized Cyanobacteria onto the Cathode as Oxygen Source for Microbial Fuel Cell

Nanostructured materials

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Liana Anicai (Politehnica University of Bucharest, Center of Surface Science and Nanotechnology, Bucharest, Romania), Madalina Fleancu, Maria Mihaly, Dionezie Bojin, Marius Enachescu

Electrocatalytic characteristics of gold nanoparticles prepared by microemulsion assisted photoreduction procedure– Application in bioanalytical detection

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René Antaño (Electroquímica, CIDETEQ, Pedro Escobedo, Mexico), J. J. Cruz Rivera, C. G. Elías Alfaro, Israel Betancourt

Electrochemical synthesis of magnetite nanoparticles in absence and presence of biocompatible surfactants

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Soledad Bollo (University of Chile, Santiago, Chile), Karina Gonzalez, Maryam Borghei, Virginia Ruiz

Electrocatalytic activity of nitrogen doped carbon nanotubes/nanofibers for hydrogen peroxide

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João Borges (CIQ-L4, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Porto, Portugal), José Campiña, Fernando Silva

Label-free Electrochemical Sensing of Human IgG by using a Polysaccharide-Antibody Fragment Nanocomposite Film

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Christopher Brett (Departamento de Quimica, Faculdade de Ciencias e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), A. Carolina Torres, M. Emilia Ghica

A New Hypoxanthine Electrochemical Biosensor Incorporating Xanthine Oxidase and Carbon Nanotubes

s03-045

Pilar Carro (Departamento de Quimica Fisica, Universidad de La Laguna, La Laguna, Spain), Alejandro González Orive, Alberto Hernandez Creus, Roberto C. Salvarezza

Molecular Conductance and Adsorption of melanin films on Au(111)

s03-046

Alejandro González Orive (Departamento de Química Física, Universidad de La Laguna, La Laguna, Spain), Pilar Carro Reglero, Alberto Hernandez Creus, Doris Elda Grumelli, Carolina Vericat, Guillermo Benitez

Electrochemical Synthesis of Ultrathin Melanin Films: Catalytic Activity and Delivery of Melanin Covered Gold Nanoparticles

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Cliciane Guadalupe de Jesus (Grupo de Desenvolvimento de Eletrodos Modificados, Universidade Estadual de Ponta Grossa, Ponta Grossa, Brazil), Dhésmon Lima, Karen Wohnrath, Christiana Andrade Pessoa

Amperometric H_2O_2 Biosensor based on Horseradish Peroxidase Immobilized on LbL Films

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Rahman Hallaj (Department of Chemistry, Sanandaj, Iran), Abdollah Salimi, Somayeh Khezrian

A novel label-free electrochemical aptasensor based on Ionic Liquid/MWCNT/Chitosan/Thionine: Application to determination of IgE

s03-049

Niloufar Hosseini Nassab (Department of Chemistry, Sharif University of Technology, Tehran, Iran)

Application of Nano-Jewelsin drug sensing:Voltammetric studies of cefepime on the surface of glassy carbon electrode modified with Nanodiamond decorated with Platinum nanoparticles

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Nengqin Jia (Department of Chemistry, Shanghai Normal University, Shanghai, China), Yanli Wen, Yao Zhang, Xiumei Sun

Bioelectrochemical and Biosensing Applications Based on Ordered Mesoporous Materials

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Juan Carlos Morales-Gomero (Laboratorio de Electroquímica Aplicada, Facultad de Ciencias, Universidad Nacional de Ingeniería, Lima, Peru), Bryan Huayhuas-Chipana, Daniel García-Osorio, Javier Quino-Favero, Adolfo La Rosa Toro

Self-assembled monolayers of Au nanoporous-cysteine for metronidazole detection

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Amene Nasseri (Department of Chemistry, Sharif University of Technology, Tehran, Iran), Saeed Shahrokhian, Mohammad Reza Hormozinezhad

Shape dependent electrocatalytic activity of silver nanoparticles toward Naltrexone

s03-053

Abdollah Salimi (Department of Chemistry, Sanandaj, Iran), Begard Kavosi, Rahman Hallaj

Highly Sensitive Immunosensing of Prostate-Specific Antigen Based on Ionic Liquid-Carbon Nanotubes Modified Electrode: Application as Cancer Biomarkers for Prostate Piopsies

s03-054

Abdollah Salimi (Department of Chemistry, Sanandaj, Iran), Hazhir Teymourian, Rahman Hallaj

Biosensing based on immobilization of enzymes onto nanocomposite containing graphene nano sheets - magnetic nanoparticles

s03-055

Razieh Salimian (Department of Chemistry, Sharif University of Technology, Tehran, Iran), Saeed Shahrokhian

Electrodeposition of Pd–Au nanoparticles on multi-walled carbon nanotubes: Application in sensitive voltammetric determination of Ceftazidime

s03-056

Juan Francisco Silva (Departamento de Química de los Materiales, Facultad de Química y Biologia, Universidad de Santiago de Chile, Santiago, Chile), Albarracin Solange, Camila Gutierrez, Carlos Silva, Hugo Duran, Jose H. Zagal

Neurotransmiters detection on mix-monolayers end functionalized with copper Phthalocianines

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Chia-Liang Sun (Department of Chemistry, and Mater. Eng., Chang Gung University, Tao-Yuan, Taiwan), Jheng-Sin Su, Jui-Hsiang Tang

Electrochemical Detection of Hydrogen Peroxide Using N-doped Graphene Nanoribbons

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Chueh-Han Wang (Institute of Materials Science and Engineering, National Central University, Jhong-Li, Taiwan), Cheng-Hung Wu, Jeng-Kuei Chang, Chun-Hung Hung

Unique Pd/Graphene Nanocomposites Constructed Using Supercritical Fluid for Superior Electrochemical Biosensing Performance

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Haifeng Yang (Department of Chemistry, Shanghai, China), Yun Miao, Ying Wen, Huan Xu, Deli JIe

Well-distribution of Carbon Nanotubes in Water by Phytic Acid Enhancement and Its Application for Biosensor

s03-060

Nan Zhu (Department of Chemistry, Technical University of Denmark, Lyngby, Denmark), Qijin Chi

Electron Transfer and Electrocatalysis of Prussian Blue Nanoparticles Confined at Surfaces with Different Chemical Properties

Photoelectrochemistry and electrogenerated chemiluminescence

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Guobao Xu (The State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China), Ling Zhang, Tao Yuan, Lianzhe Hu, Zhongyuan Liu

Several Methods for Improving Sensitivity of Electrochemiluminescent Analysis

Surface modification

s03-062

Rafael Martos Buoro (Institute of Chemistry, University of São Paulo, São Paulo, Brazil), Raphael Prata Bacil, L. C. C. da Silva, R. P. da Silva, Antonio William Oliveira Lima, S. H. P. Serrano

Preparation and Preliminary Characterization of Lignin-Gold Carbon Paste Electrode

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María Fernanda Cerdá Bresciano (Laboratorio de Biomateriales, Facultad de Ciencias, Udelar, Montevideo, Uruguay), Natalia Gesto, Eduardo Méndez

Copper-TBA systems for electrochemical sensing

s03-064

Mirela Diaconu (Center of Bioanalysis, National Institute for Biological Sciences, Bucharest, Romania), Gabriel Lucian Radu, Ana Chira, Madalina Bucur

Study of heterogeneous electron transfer process of laccase from Trametes versicolor on gold nanoparticles functionalized ITO electrodes

s03-065

Hendrik Du Toit (Department of Chemical Engineering, University of Bath, Bath, United Kingdom), Frank Marken, Mirella Di Lorenzo

Development of High Surface Area Implantable Enzymatic Micro-Electrodes

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Mathieu Etienne (LCPME/CNRS, Villers-lès-Nancy, France), Veronika Urbanova, Naoual Allali, Victor Mamane, Manuel Dossot, Alain Walcarius

Covalently functionalized carbon nanotubes for electrochemical biocatalysis

s03-067

Marcin Karbarz (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Klaudia Kaniewska, Zbigniew Stojek

Modification of electrodes with environment sensitive gels

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Stepanka Lachmanova (J. Heyrovsky Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Magdalena Hromadova, Jana Bulickova, Viliam Kolivoska

Adsorption of Papain on the Modified Electrode Surfaces - An AFM and QCM Study

s03-069

Florence Lagarde (University of Lyon, Institute of Analytical Sciences, Villeurbanne, France), Amina Betatache, Nicole Jaffrezic-Renault

Synthesis of thin acrylate polymer films onto gold electrode surface in view of biomimetic molecular-imprinted sensor development

s03-070

Katherine Lawrence (Department of Chemistry, University of Bath, Bath, United Kingdom), John Watkins, Frank Marken, Tony James

Covalently Modified Carbon Nanoparticles for Electrochemical Processes

s03-07

Anca-Iulia Stoica (CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH, Wiener Neustadt, Austria), Norica Godja, Christoph Kleber

Development of electrochemical sensors for bioactive nitrogenous compounds

s03-072

Zahra Taleat (Department of Chemistry, Yazd, Iran) Giovanna Marrazza, Mohammad Mazloum- Ardakani

A label free Electrochemical Immunosensor Based on Functionalized Polymer for Detecting Human Cancer Biomarkers

s03-073

Annalisa Vacca (Dipartimento di Ingegneria Meccanica, Chimica e Materiali Università di Cagliari, Cagliari, Italy), Michele Mascia, Simonetta Palmas, Anna Da Pozzo, Massimo Barbaro

Grafting of Polyaniline on Gold Through Electroreduction of Diazonium Salts

s03-074

Britta Vaske (Department of Pure and Applied Chemistry, CIS- Center of Interface Science, Faculty of Mathematics and Natural Sciences, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany), Frank Meiners, Inka Plettenberg, Jan Ross, Jens Christoffers, Gunther Wittstock

Using the Chemical Lens for Local Microelectrochemical Pattern of Organic Thin Layers

s03-075

Li-Jun Wan (Institute of Chemistry, Chinese Academy of Sciences, Beijing, China)

Regulative Dispersion and Distribution with Designable Surface Molecular Templates for Biosensors

Symposium 4: Advanced Batteries and Electrochemical Capacitors

Anodes

s04-001

Daniel Alves Dalla Corte (Laboratoire Physique de la Matière Condensée, CNRS-Ecole Polytechnique, Palaiseau, France), Christian Jordy, Georges Caillon, Thierry Gacoin, Michel Rosso, François Ozanam

In-situ FTIR Study of Amorphous Silicon Anodes

s04-002

Mario Aparicio (Institute of Ceramic and Glasses (CSIC), Madrid, Spain), Jadra Mosa, John Fredy Vélez, Akihiro Yamaguchi, Kiyoharu Tadanaga, Masahiro Tatsumisago

Preparation of $Li_4Ti_5O_{12}$ thin-film electrodes by sol-gel for Lithium-ion microbatteries

s04-003

Nathalie Delpuech (Institut des Matériaux Jean Rouxel (IMN), University of Nantes, CNRS UM6502, 44300, France), Magali Gauthier, Nicolas Dupre, Joel Gaubicher, Philippe Moreau, Bernard Humbert, Manuella Cerbelaud, Bernard Lestriez, Dominique Guyomard

The Effects of Oxide Surface Layer and Additives on the Cycle Life of Si-based Negative Electrode

s04-004

Takayuki Doi (Office of Society-Academia Collaboration for Innovation, Kyoto University, Uji, Japan), Yasuhiro Domi, Hiroe Nakagawa, Shigetaka Tsubouchi, Manabu Ochida, Toshiro Yamanaka, Takeshi Abe, Zempachi Ogumi

Electrochemical Raman and AFM Studies on Degradation of a Graphite Negative-electrode Using Edge Plane HOPG

s04-005

Hyungkyu Han (Department of Materials Science Engineering, Hanyang University, Seoul, Korea), Taeseup Song, Hyunjung Park, Jeonghyun Kim, Hansu Kim, Ungyu Paik

Dominant Factors Governing the Rate Capability of TiO_2 Nanotube Anode for Lithium Ion Batteries

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Ling Huang (Department of Chemistry, Xiamen University, Xiamen, China), S. G. Sun, Yang He

Facile synthesis of Sb-Cu@C core-shell nanocomposites as a superior anode material for lithium ion batteries

s04-007

Jae-Hun Jeong (School of Chemical Engineering & Bioengineering, Ulsan, Korea), Dong-Won Jung, Sang-Wook Han, Eun-Suok Oh

Nano-sized Ca-Sn alloy/graphene composites as anode materials for Lithium ion batteries

s04-008

Dong-Won Jung (School of Chemical Engineering & Bioengineering, University of Ulsan, Ulsan, Korea), Jae-Hun Jeong, Sang-Wook Han, Eun-Suok Oh

Lithium ion battery anode using iron oxide scale produced via quenching process of carbon steel

s04-009

Krzysztof Jurewicz (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), Dawid Janasiak, Krzysztof Babel

Hydrogen storage in dense lignocellulose-based active carbons activated at various temperatures

s04-010

Jan Kaspar (Institut für Materialwissenschaft, Technische Universität Darmstadt, Darmstadt, Germany), Magdalena Graczyk-Zajac, Ralf Riedel

Lithium Insertion into Nano-silicon/Silicon Oxycarbide Composite Anodes for Li-ion Batteries

s04-011

Maiko Kawakubo (Department of Chemistry, Faculty of Engineering, Mie University, Mie, Japan), Nobuyuki Imanishi, Osamu Yamamoto, Yasuo Takeda

Electrode properties of carbon anode with carbon nanotubes for dry polymer lithium-ion batteries

s04-012

Dong-Wan Kim (Department of Materials Science and Engineering, Suwon, Korea), Kyung-Mi Min, Gwang-Hee Lee, Kyung-Soo Park

Low-temperature Synthesis of Carbon-coated Nanostructured Rutile Anodes

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Jae-Chan Kim (Department of Materials Science and Engineering, Ajou University, Suwon, Korea), Seung-Deok Seo, Ah-Hyeon Lim, Dong-Wan Kim

Electrospun Sn-based Nanocomposite Fibers for Lithium Ion Battery Anodes

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Yong Il Kim (Interdisciplinary School of Green Energy, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea), Yuwon Park, Sung You Hong

Li metal/Porous Carbon Electrode as an Anode for Lithium-Sulfur Batteries

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Gyeong-Ok Kim (Department of Chemistry, University of Ulsan, Ulsan, Korea)

Improved performance of surface modification and cation-doped spinel $Li_4Ti_5O_{12}$ for LIB

s04-016

Maciej Kopczyk (Institute of Non-ferrous Metals, Division in Poznan, Central Laboratory of Batteries and Cells, Poznan, Poland), Agnieszka Sierczynska, Grzegorz Lota, Katarzyna Lota, Pawel Swoboda

Influence of the Electrode Preparation Process on the Electrochemical Performance of Metal Hydride Electrodes

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Bernard Lestriez (Institut des Matériaux Jean Rouxel, Université de Nantes, CNRS, Nantes, France), Cyril Marino, Driss Mazouzi, Julien Fullenwarth, Laure Montconduit

Diagnostic of the failure mechanism in conversion and intermetallic electrodes for Li batteries through analysis of polarization fingerprint

s04-018

Jun-Tao Li (School of Energy Research, Xiamen University, Xiamen, China), Jie Liu, Qian Zhang, Ling Huang, Shi-Gang Sun

Preparation and Electrochemical Performance of Nano-sized Si Material for Lithium-ion Battery

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Ah-Hyeon Lim (Department of Materials Science and Engineering, Ajou University, Suwon, Korea), Hyun-Woo Shim, Jae-Chan Kim, Dong-Wan Kim

Li Electroactivity of Hydrothermally Prepared $MnWO_4$ Nanorods

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Fredrik Lindgren (Department of Chemistry, Ångström Laboratory, Uppsala, Sweden), Anna Andersson, Kristina Edström, Fredrik Björefors

Silicon as Negative Electrode Material for Na-ion Batteries

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Kyung-Mi Min (Department of Materials Science and Engineering, Ajou University, Suwon, Korea), Kyung-Soo Park, Dong-Wan Kim

Phase and Morphological Evolution of TiO_2 Nanopowders in an Acidic Solution Containing LiCl

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Salvatore Piazza (Dipartimento di Ingegneria Chimica, Gestionale Informatica Meccanica, Università di Palermo, Palermo, Italy), Chiara Mistretta, Serena Randazzo, Rosalinda Inguanta, Carmelo Sunseri

Synthesis and Characterization of Nanostructured Electrodes for Innovative Lead Acid Batteries

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Ji Heon Ryu (Graduate School of Knowledge-based Technology and Energy, Siheung-Si, Korea)

Effect of the initial phase transformation on the electrochemical characteristics of SnO negative electrode

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Agnieszka Sierczynska (Institute of Non-ferrous Metals, Division in Poznan Central Laboratory of Batteries and Cells, Poznan, Poland), Waclaw Iwasieczko, Grzegorz Lota, Katarzyna Lota, Pawel Swoboda

Hydrogen Storage Properties of Composites Based on Multi-component AB5-type Alloy with Carbon Nanodeposit

s04-025

Taeseup Song (Department of Materials Science Engineering, Hanyang University, Seoul, Korea), Hyungkyu Han, Jeonghyun Kim, Young-Min Choi, Hyuk Chang, Ungyu Paik

Three-dimensional Hollow Ge Particles as an Anode for High Performance Li-ion Batteries

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Waltraud Taucher-Mautner (Institute for Chemistry and Technology of Materials, Graz University of Technology, Graz, Austria), Julia Franziska Tschische

Investigations of Zinc Electrodes for Rechargeable Zinc-Air Batteries

s04-027

Masahiro Toyoda (Applied Chemistry, Faculty of Engineering, Oita University, Oita, Japan), Asuka Arikawa, Taro Kinumoto, Tomoki Tsumura

Characteristic Change of Anode Electrode for Lithium ion Secondary Battery by using TiO_2(B)/VN Composite

s04-028

Dihua Wang (Wuhan University, Wuhan, China), Huayi Yin

Alkaline Earth Boride: Potential Anode Material for Alkaline Primary Battery with Ultrahigh Specific Energy

s04-029

Monika Wilamowska (Institut für Materialwissenschaft, Technische Universität Darmstadt, Darmstadt, Germany), Magdalena Graczyk-Zajac, Ralf Riedel

Influence of carbon type on the electrochemical properties of SiCN/carbon composite anodes for Li-ion batteries

s04-030

Seung Hee Woo (Interdisciplinary School of Green Energy, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea), Yuwon Park, Jaephil Cho

Trigonal $Na_4Ti_5O_{12}$ Anode for Lithium-ion Batteries

s04-031

Jun Yang (Department of Chemical Engineering, Shanghai Jiao Tong University, Shanghai, China), Pengfei Gao, Haiping Jia, Jingjun Zhang

Mesoporous Silicon/Metal Silicide/Carbon Composite as Stable Anode Material for Li-ion Batteries

s04-032

Sukeun Yoon (Korea Institute of Energy Research, Daejeon, Korea)

Preparation and Electrochemical Behavior of Molybdenum Oxynitride Anode for Lithium-ion Batteries

s04-033

Jan von Zamory (Institut of Physical Chemistry and MEET, University of Muenster, Muenster, Germany), Elie Paillard, Mélanie Bedu, Sébastien Fantini, Martin Winter, Stefano Passerini

Polymeric Ionic Liquid Nanobinder: Synthesis and Use in Graphite Electrodes

Cathodes

s04-034

Ju-Hyun Cho (Department of Chemical Engineering, Kangwon National University, Chuncheon, Korea), Jang-Hoon Park, Myeong-Hee Lee, Hyun-Kon Song

Polymer electrolyte-skinned active material strategy toward high-voltage lithium-ion batteries: polyimide-coated $LiNi_{0.5}Mn_{1.5}O_4$ spinel cathode material case

s04-035

Andrzej Czerwinski (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Bartosz Hamankiewicz, Michal Krajewski, Monika Michalska, Dominika Ziolkowska

Sol-Gel Synthesis And Characterization of $LiMn_2O_4$/Carbon Composites as Cathode Material for Lithium-Ion Batteries

s04-036

Andrzej Czerwinski (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Michal Krajewski, Bartosz Hamankiewicz, Monika Michalska, Dominika Ziolkowska

Surface-modified and Metal-doped $Li_4Ti_5O_{12}$ as an Anode Material in Lithium-Ion Batteries

s04-037

Ahmed Etman (Nano Applications Materials Engineering, IMEC, Leuven, Belgium), Aleksandar Radisic, Mahmoud Emara, Cedric Huyghebaert, Philippe Vereecken

Manganese Dioxide Coated 3D Silicon Pillars for Lithium-ion Battery Applications

s04-038

Jungeun Hyun (Environmental Materials and Components R&D Center, Korea Automotive Technology Institute, Chonan-Si, Korea), Min-Su Shim, Joon-won Min

The Preparation and Electrochemical Properties of Polypyrrole-sulfur Composite in Lithium-sulfur Battery

s04-039

Kyu-Nam Jung (New and Renewable Energy Research Division, Korea Institute of Energy Research, Daejeon, Korea), Jong-Won Lee, Sukeun Yoon, Kyoung-Hee Shin

Electrochemical Performances of La-Ni-based Oxide Catalysts for Li-O_2 Battery in Aqueous Electrolyte

s04-040

Ki Chun Kil (WCU Department of Energy Engineering, Hanyang University, Seoul, Korea), Chae-Woong Cho, Kijun Kim, Jeong-Gu Yeo, Yeon-Gil Jung, Ungyu Paik

Influences of Polyurethane-based Dispersant on Dispersion Property of Carbon Black and Electrochemical Properties of $Li(Ni_{1/3}Co_{1/3}Mn_{1/3})O_2$ Cathode

s04-041

Christian Kuss (Department of Chemistry, Université du Québec à Montréal, Montreal, Canada), Guoxian Liang, Steen Brian Schougaard

Atomistic Modeling of the Inter-site Exchange Defect in $LiFePO_4$ - Thermodynamics of Delithiation

s04-042

Sung Hoon Lim (Department of Materials Science and Engineering, Korea University, Seoul, Korea), Woo Young Yoon

The catalytic behavior of V_2O_5/Al_2O_3 in rechargeable Li-O_2 batteries

s04-043

Ottavio Lugaresi (Chimica Fisica ed Elettrochimica, Milano, Italy), Giuseppe Cappelletti, Alessandro Minguzzi, Piercarlo Mustarelli, Nerino Penazzi, Alberto Vertova

New cathodes for Li/air batteries based on mesoporous carbon/Ag-doped MnO_2 composites

s04-044

Edyta Madej (Analytische Chemie - Elektroanalytik & Sensorik, Ruhr-Universität, Bochum, Germany), Michael Espig, Wolfgang Schuhmann, Fabio La Mantia

Characterization of Thin-film Batteries Printed on Paper by Electrochemical Techniques

s04-045

Yuya Maeda (Department of Chemistry for Materials, Graduate School of Engineering, Mie University, Mie, Japan), Nobuyuki Imanishi, Ichiro Uechi, Yasuo Takeda, Osamu Yamamoto

Charge-Discharge Performance for Aqueous Li-Air Secondary Batteries Using an Anion Exchange Membrane

s04-046

Sebastian Menne (Westfälische Wilhelms-Universität, MEET Battery Research Centre, Münster, Institute of Physical Chemistry, Münster, Germany), Martin Winter, Stefano Passerini, Andrea Balducci

The influence of coating on the stability of lithium iron phosphate in aqueous electrolyte

s04-047

Sun-il Mho (Division of Energy Systems Research, Ajou University, Suwon, Korea), Hung-Cuong Dinh, Jeong-Jin Lee, In-Hyeong Yeo

High--rate Performance of PEDOT Coated Nanocrystalline $LiFePO_4$ Cathode

s04-048

Alessandro Minguzzi (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milan, Italy), Juqin Zeng, Silvia Bodoardo, Giuseppe Cappelletti, Mihaela Aneta Dumitrescu, Piercarlo Mustarelli, Alberto Vertova

Effect of MnO_2 preparation and amount added on the Li-air cathode behaviour

s04-049

Chung-Ta Ni (Materials Science and Engineering, National Cheng Kung University, Tainan City, Taiwan), Kuan-Zong Fung, Chi-Yang Liu, Shu-Yi Tsai

Preparation of $LiCoO_2$ Film Electrode for Flexible Li Microbattery Applications

s04-050

Yong Joon Park (Department of Advanced Materials Engineering, Kyonggi University, Suwon, Korea), Taek Han Yoon, Dae Sik Kim, Chang Sung Park

Catalytic properties of carbon/oxide composite for Li/air batteries

s04-051

Adam Sobkowiak (Department of Chemistry, Ångström Laboratory, Uppsala University, Uppsala, Sweden), Torbjörn Gustafsson, Anna Andersson, Kristina Edström, Fredrik Björefors

Synthesis Optimization and Performance Enhancement of $LiFeSO_4F$ as Cathode Material for Li-ion Batteries

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Arnaldo Visintin (Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA), Facultad de Ciencias Exactas, UNLP, CCT La Plata-Conicet., La Plata, Argentina)

Lithium-ion Batteries Materials: The State of Research in the University of La Plata, Argentina

s04-053

Dennis Wittmaier (German Aerospace Center, Stuttgart, Germany), Norbert Wagner, K. A. Friedrich

Bifunctional Catalysts for Lithium-Air Batteries with Aqueous Alkaline Electrolytes

s04-054

Dah-Yeon Yoo (Division of Energy Systems Research, Ajou University, Suwon, Korea), Soon-Kie Hong, In-Hyeong Yeo, Won Il Cho, Sun-il Mho

Galvanostatic Intermittent Titration and ac Impedance Analysis of V_2O_5/PEDOT Composite Film Cathodes

Electrochemical capacitor

s04-055

Qamar Abbas (Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), François Beguin

Symmetric capacitor with microporous carbon electrodes in new types of aqueous electrolytes.

s04-056

Seyed Hamed Aboutalebi (Institute for Superconducting & Electronic Materials, Australian Institute for Innovative Materials, University of Wollongong, Wollongong, Australia)

Layered Ultra-large Graphene Oxide and Graphene Architectures as Supercapacitor Electrodes

s04-057

Jeng-Kuei Chang (Institute of Materials Science and Engineering, National Central University, Jhong-Li, Taiwan), Yun-Shan Li, Ming-Tsung Lee, Chung-Jui Su, I-Wen Sun

Doped Butylmethylpyrrolidinium–Dicyanamide Ionic Liquid as Electrolyte for MnO_2 Supercapacitors

s04-058

Alfred Chidembo (Institute for Superconducting and Electronic Materials (ISEM, Wollongong, Australia), Seyed Hamed Aboutalebi, Konstantin Konstantinov

Graphene Oxide/Manganese Phthalocyanine Composites for Supercapacitor Electrodes

s04-059

Dalva Alves de Lima Almeida (Instituto Nacional de Pesquisas Espaciais, INPE, São José dos Campos, Brazil), Carla Polo Fonseca, Maurício Ribeiro Baldan, Neidenêi Gomes Ferreira

Electrochemical Characterization of the Composite CF/ PAni/CNT

s04-060

Dalva Alves de Lima Almeida (Instituto Nacional de Pesquisas Espaciais, INPE, São José dos Campos, Brazil), Erica Freire Antunes, Mayara Camila Duarte de Oliveira, Viviane Q. da Silva, Vagner E. C. Marques, Carla Polo Fonseca, Maurício Ribeiro Baldan, Neidenêi Gomes Ferreira

Synthesis of CF/CNT/PAni for the electrode of electrochemical capacitors

s04-061

Krzysztof Fic (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), Mikolaj Meller, Grzegorz Lota, Elzbieta Frackowiak

The Influence of Solvation on Supercapacitor Operating Voltage

s04-062

Nemanja Gavrilov (Faculty of Physical Chemistry, Belgrade, Serbia), Milica Vujkovic, Igor Pasti, Gordana Ciric-Marjanovic, Slavko Mentus

Polyaniline-derived nanocarbons for energy conversion and storage

s04-063

Zoraida González (Instituto Nacional del Carbón (INCAR-CSIC), Oviedo, Spain), Clara Blanco, Silvia Roldán, Rosa Menéndez, Marcos Granda, Ricardo Santamaría

Supercapacitors modified with redox active electrolytes

s04-064

Chi-Chang Hu (Department of Chemical Engineering, National Tsing Hua University, Hsin-Chu, Taiwan), Chia-Wei Wang, Kuo-Hsin Chang, Tzu-Ho Wu

Anodic Composite Deposition of Hydrous RuO_2-based Nanocomposites for Electrochemical Capacitors

s04-065

Krzysztof Jurewicz (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), Katarzyna Szatkowska, Sergiusz Bielawny, Agata Pawlicka

The high-power asymmetric supercapacitor made of various activated carbons

s04-066

Ick-Jun Kim (Battery Research Center, Korea Electrotechnology Research Institute, Changwon, Korea), Sunhye Yang, Mi-Kyung Bae, In-Sik Choi

Electrochemical Performances of Activated Carbons as a Positive Electrode in Lithium Ion for Capacitor

s04-067

Kwang-Bum Kim (Department of Material Science and Engineering, Yonsei University, Seoul, Korea), Hee-Chang Youn

The Effect of Carbon Nanotube Nano-spacer on the Electrochemical Properties of Reduced Graphene Oxide for Supercapacitor Applications

s04-068

Ann Laheäär (University of Tartu, Tartu, Estonia), Anna-Liisa Peikolainen, Mihkel Koel, Alar Jänes, Enn Lust

Comparison of Carbon Aerogel and Carbide-Derived Carbon as Electrode Materials for Non-aqueous Supercapacitors with High Performance

s04-069

Hoyeon Lee (Department of Chemical Engineering, Inha University, Incheon, Korea), Injun Jang, Changhyun Park

Electrochemical etching of aluminum for uniform etch pits using patterned mask with V-curable epoxy resin by a PDMS Stamp

s04-070

Yuliya Mateyshina (Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia), Artem Ulihin, Chingiz Barnakov, Nikolai Uvarov

Nanocomposite carbon-based electrode materials for supercapacitors

s04-071

Mir Fazlollah Mousavi (Department of Chemistry, Tarbiat Modares University, Tehran, Iran), Afshin Pendashteh, Mohammad Safi Rahmanifar

Supercapacitive Behavior of Copper Oxide Nanoparticles on a Graphene Oxide Network

s04-072

Min-Sik Park (Advanced Batteries Research Center, Korea Electronics Technology Institute, Seongnam, Korea), Jeom-Soo Kim, Young-Jun Kim

Rational Design of Positive Electrode for Lithium-ion Capacitors

s04-073

Laurent Pilon (University of California, Los Angeles Mechanical and Aerospace Engineering Dept., Los Angeles, USA)

Thermal Modeling of Electric Double Layers During Cycling

s04-074

Sebastian Pohlmann (University of Muenster, MEET Battery Research Centre Institute of Physical Chemistry, Münster, Germany), Adrian Brandt, Andrea Balducci

Mixtures of organic carbonates and ionic liquids as electrolytes for supercapacitors

s04-075

Slawomir Porada (Wetsus, Centre of Excellence for Sustainable Water Technology, Leeuwarden, The Netherlands / Department of Polymers and Carbon Materials, Faculty of Chemistry, Wroclaw University of Technology, Wroclaw, Poland), Volker Presser, Marek Bryjak, Bert van der Wal, Martin Bazant, Yury Gogotsi, Maarten Biesheuvel

Water Desalination by Capacitive Deionization Using Nanoporous Carbon Eelectrodes

s04-076

Matei Raicopol (Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Bucharest, Romania), Mariana Ionita, Luisa Pilan

Supercapacitance of Single-walled Carbon Nanotubes-Polypyrrole Composites

s04-077

Nataliya Roznyatovskaya (Fraunhofer Institute of Chemical Technology, Pfinztal, Germany), Alexander Rupp, Karsten Pinkwart, Jens Tübke, Ingo Krossing

Room-temperature Ionic Liquids with Fluorinated Alkoxyaluminate Anions $[Al(OR^F)_4]^-$: Comparative study for supercapacitor application

s04-078

Maryam Salari (Institute for Superconducting & Electronic Materials (ISEM), Innovation Campus, University of Wollongong, Wollongong, Australia), Seyed Hamed Aboutalebi, Alfred T. Chidembo, Konstantin Konstantinov, Hua Kun Liu

Enhancement in Electrochemical Performance of TiO_2 Nanotubes Arrays as an Effect of Post-annealing Treatment

s04-079

Maryam Salari (Institute for Superconducting & Electronic Materials (ISEM), Innovation Campus, University of Wollongong, Wollongong, Australia), Seyed Hamed Aboutalebi, Alfred T. Chidembo, Konstantin Konstantinov, Hua Kun Liu

Electrochemical Behaviour of the Nanoporous to Nanotubular TiO_2 Transition in Supercapacitor Applications

s04-080

H. Sayahi (Department of Chemistry & Chemical Engineering, Reaserch Center of Iran, Tehran, Iran), Z. Jamshidi, A. Zolfaghari

Systematic Study of Fe_3O_4/ CB Nanocomposite as Electrode Material for Supercapacitors

s04-081

Indrek Tallo (Institute of Chemistry, University of Tartu, Tartu, Estonia), Thomas Thomberg, Alar Jänes, Enn Lust

Carbon Electrode Materials for Electric Double-layer Capacitors Derived from Tungsten Carbide

s04-082

Kerli Tõnurist (Institute of Chemistry, University of Tartu, Tartu, Estonia), Thomas Thomberg, Alar Jänes, Enn Lust

Influence of separator properties onto electrochemical performance of electrical double-layer capacitors

s04-083

Artem Ulihin (Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia), Yulia Mateyshina, Nikolai Uvarov, Irina Bagryantseva, Galina Lavrova, Valentina Ponomareva

All solid-state supercapasitors using lithium and protons solid composite electrolytes

s04-084

Sunhye Yang (Battery Research Center, Korea Electrotechnology Research Institute, Changwon, Korea), Ick-Jun Kim, In-Sik Choi, Sung-Tai Lee

High energy density of lithium-ion capacitors by control of pre-doping potential on negative electrodes

Electrolytes

s04-085

Yurii Baikov (Solid State Physics/Ioffe Physical Technical Institute of RAS, Saint Peterburg, Russia), Bernard Melekh, Eugenii Nikulin, Vladimir Klimov, Michail Kompan

Little Known Heterostructures Solid Alkaline Protonic – Electronconductor: Hydroxide Ion as a Proton Acceptor and an Electrochemically Active Species

s04-086

Oleg Borodin (Army Research Laboratory, Adelphi, USA), Richard Jow, Lidan Xing

Electrolyte Oxidative Stability and Decomposition Pathways from DFT Calculations

s04-087

Mouad Dahbi (Laboratoire PCM2E, Tours, France), Mérièm Anouti

Dinitrile-based Electrolytes for Asymmetric Hybrid Supercapacitor

s04-088

Yvon Rodrigue Dougassa (Laboratoire PCM2E (EA 6299), Tours, France), Johan Jacquemin, Cécile Tessier, Loubna El Ouatani, Mérièm Anouti

Low-pressure carbone dioxide solubility in pure electrolyte solvents for lithium-ion batteries as a function of temperature. Measurement and prediction

s04-089

Eunhye Kil (Department of Chemical Engineering, College of Engineering, Kangwon National University, Chuncheon, Korea), HyoJeong Ha, KeunHo Choi, YoHan Kwon, JeYoung Kim, ChangKee Lee

UV-curable semi-imterpenetrating polymer network-integrated, highly-bendable plastic crystal composite electrolytes for shape-conformable all-solid-state lithium-ion batteries

s04-090

Minseo Kim (Department of Chemical Engineering, Inha University, Incheon, Korea), Hoyeon Lee, Eunsaem Ahn

Electrochemical behaviors of Li-air battery using ionic liquid electrolyte

s04-091

Fumihiko Kosaka (Department of Environment Systems, Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Chiba, Japan), Yoshito Oshima, Junichiro Otomo

Crystallization Kinetics and Ionic Conductivity in Lithium-ion Conducting Glass Ceramics

s04-092

Young-Gi Lee (Power Control Device Research Team, Electronics & Telecommunications Research Institute(ETRI), Daejeon, Korea), Kun-Young Kang, Dong Ok Shin, Kwang Man Kim

Electrochemical Properties of 1.5V and 3V-Class Film Batteries for Printed Electronics Devices

s04-093

Yuliya Mateyshina (Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia), Artem Ulihin, Alexander Matvienko, Nikolai Uvarov

Transport properties of composite solid electrolytes based on $LiNO_2$

s04-094

Jadra Mosa (Institute of Ceramic and Glasses (CSIC), Madrid, Spain), John Fredy Vélez, Raul Procaccini, Mario Aparicio

Synthesis and characterization of silica-epoxy hybrid organic-inorganic electrolytes prepared by sol-gel for Lithium-ion microbatteries

s04-095

Laure Timperman (Laboratoire PCM2E Département de Chimie Université François Rabelais Tours, Tours, France), Hervé Galiano, Daniel Lemordant, Mérièm Anouti

Protic ionic liquid electrolyte for supercapacitor applications

s04-096

Katsuhiko Tsunashima (Wakayama National College of Technology, Wakayama, Japan), Hikaru Taguchi, Atsuko Kawabata, Fumihiro Yonekawa, Shun Kodama

Properties of phosphonium ionic liquid-based electrolytes for lithium secondary batteries

s04-097

Nobuko Yoshimoto (Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Keisuke Hotta, Minato Egashira, Masayuki Morita

Electrochemical Deposition of Magnesium on the Metal Substrate from Alkylmagnesiumbromide Containing Ionic Liquid

Flow-redox battery

s04-098

Hassan Al-Fetlawi (University of Babylon, Hilla, Iraq)

Mathematical Modeling and Electrolyte Monitoring to the Performance of a Vanadium Redox Flow Battery

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Zoraida González (Instituto Nacional del Carbón (INCAR-CSIC), Oviedo, Spain), Sorin Vizireanu, Georghe Dinescu, Clara Blanco, Ricardo Santamaria

Carbon Nanowalls Films as Nanostructured Electrode Materials in Vanadium Redox Flow Batteries

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Zoraida González (Instituto Nacional del Carbón (INCAR-CSIC), Oviedo, Spain), Cristina Botas, Patricia Alvarez, Silvia Roldán, Clara Blanco, Ricardo Santamaría, Marcos Granda, Rosa Menéndez

Graphene Materials Obtained by Thermal Reduction of Graphite Oxides as Positive Electrodes in Vanadium Redox Flow Batteries

s04-101

Scott Gorman (Department of Engineering and the Environment, University of Southampton, Southampton, United Kingdom), Richard Wills, Xiaohong Li, Stephen Price, Stephen Thompson, Derek Pletcher, Frank Walsh, Andrea Russell

Development of Zinc-Air Flow Batteries for Energy Storage in Electrical Power Distribution Networks

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Ki Jae Kim (Advanced Batteries Research Center, Korea Electronics Technology Institute, Seongnam, Korea), Min-Sik Park, Jae-Hun Kim, Young-Jun Kim

Tailoring Metal Foam Electrode for Non-aueous Redox Flow Batteries

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Chun An Ma (Zhejiang University of Technology, Hangzhou, China), You Qun Chu, Dan Dan Li, Zhao Hua Li

Lead-copper electrodes for vanadium redox flow battery

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Stephen Thompson (School of Chemistry University of Southampton, Southampton, United Kingdom), Stephen Price, Xiaohong Li, Richard Wills, Scott Gorman, Andrea Russell, Derek Pletcher, Frank Walsh

Bifunctional Oxygen Catalysts for Energy Storage

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Christian Zelger (Competence Centre for Electrochemical Surface Technology GmbH, Institute for Chemistry and Technology of Materials, Graz University of Technology, Graz, Austria), Andreas Laskos, Bernhard Gollas

The Effect of Additives on Zinc Electrodeposition from Alkaline Zincate Electrolytes

Ionic liquids

s04-106

Aurélien Boisset (PCM2E, Physicochimie des Matériaux et des Électrolytes pour l'Energie (Ea 4244), Tours, France), Laurence Athouel, Johan Jacquemin, Thierry Brousse, Mérièm Anouti

New Electrolytes for Ultracapacitor Devices Using Manganese Oxide As Electrode Material

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Maciej Galinski (Faculty of Chemical Technology, Poznan University of Technology, Poznan, Poland)

Ionic liquids as electrolytes in FeS_2-based primary lithium batteries

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Markus Gnahm (Institute of Electrochemistry, Ulm, Germany), Tamás Pajkossy, Dieter M. Kolb

The Electrified Gold/Ionic Liquid Interface

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Hye Jin Lee (Department of Chemistry, Kyungpook National University, Daegu, Korea), Yun Ji Kang, Eum Ji Kim

Synthesis and Additive Effects of Room Temperature Ionic Liquids for Battery Applications

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Kenta Motobayashi (Catalysis Research Center, Sapporo, Japan), Naoya Nishi, Takashi Kakiuchi, Masatoshi Osawa

Structures and Dynamics of Ionic Liquid/Metal Electrode Interface Probed by SEIRAS

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Johannes Ploeger (Institute for Electrochemistry, University of Ulm, Ulm, Germany), Aleix Comas-Vives, Josef Anton, Timo Jacob

The interface between Au(100) and 1-butyl-3-methyl-imidazolinium-hexaflourophosphate

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Jakub Reiter (MEET Battery Research Centre, Institute of Physical Chemistry, University of Muenster, Muenster, Germany), Martina Nadherna, Robert Dominko

Electrochemical behaviour of Li_2FeSiO_4, $LiCoO_2$ and $LiCo_{1/3}Mn_{1/3}Ni_{1/3}O_2$ with ionic liquids at elevated temperature

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Tavo Romann (Institute of Chemistry, University of Tartu, Tartu, Estonia), Piret Pikma, Enn Lust

Supercapacitor Materials in an Ionic Liquid: *In situ* Infrared Study Using Magnetron Sputtered C, Al, Ti, Ni, and Cu Thin Films as the Electrodes

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Nedher Sanchez-Ramirez (Instituto de Química, Universidade de São Paulo, São Paulo, Brazil), Roberto Torresi

Physico-chemical Properties of Ionic Liquids Based in Tetracyanoborate Anion

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Ramesh T. Subramaniam (Centre for Ionics, University Malaya, Department of Physics, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia), Chiam Wen Liew, A.K. Arof

Electrochemical and Thermal Properties of Corn-starch-based Biopolymer Electrolytes with Doping of Environmentally Friendly Ionic Liquid

Li-ion batteries

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Milan Bousa (J. Heyrovsky Institute of Physical Chemistry of the ASCR, Prague, Czech Republic), Otakar Frank, Ladislav Kavan

Raman Spectroelectrochemical Study of Graphene Oxide Reduction for the Use as Conductive Additive in Cathode Materials in Li-ion Secondary Batteries

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Eun-Sun Choi (Department of Chemical Engineering, Kangwon National University, Chun-Cheon, Korea)

Porous structural evolution of nonwoven composite separators driven by sacrificial SiO2 nanoparticles/ PVdF-HFP precursors

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Hung-Cuong Dinh (Division of Energy Systems Research, Ajou University, Suwon, Korea), In-Hyeong Yeo, Won Il Cho, Sun-il Mho

Electrochemical Performance of Nano-sized $LiMnPO_4$ Cathodes with Various Morphologies

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Juan Luis Gómez-Cámer (Paul Scherrer Institut, Villigen, Switzerland)

Lithium-Bismuth Alloy as a Reference Electrode for Electrochemical Impedance Spectroscopy

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Andreas Hofmann (Karlsruher Institut für Technologie, Institut für Angewandte Materialien - Werkstoffprozesstechnik, Eggenstein-Leopoldshafen, Germany), Michael Schulz, Thomas Hanemann

Effects of the Conducting Salt Composition in Ionic Liquid-based Electrolytes on the Performance of Li-Ion Batteries

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Soon-Kie Hong (Division of Energy Systems Research, Ajou University, Suwon, Korea), In-Hyeong Yeo, Won Il Cho, Sun-il Mho

Structural and Electrochemical Characteristics of Morphology-controlled $LiNi_{0.5}Mn_{1.5}O_4$ Cathodes

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Stefan Klink (Ruhr-Universität Bochum Analytische Chemie, Bochum, Germany), Edyta Madej, Wolfgang Schuhmann, Fabio La Mantia

Improved Swagelok Cells for Three-Electrode Electrochemical Impedance Spectroscopy of Lithium Ion Battery Materials

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Barbora Laskova (J. Heyrovsky Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic), Otakar Frank, Ladislav Kavan, Marketa Zukalova

Spectroelectrochemical Study of Lithium Insertion into $Ti^{18}O_2$

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Diana Leiva (Energy Systems, Fraunhofer IKTS, Dresden, Germany), Christian Bretthauer, Marco Fritsch, Georg Fauser, Mareike Wolter

The Effect of Porosity and Structural Properties on the Performance of LFP Cathodes in Lithium-ion Batteries

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Jeng-Yu Lin (Department of Chemical Engineering, Tatung University, Taipei City, Taiwan), Chao-Chia Hsu

Structural and Electrochemical Characteristics of Carbon-coated $Li_4Ti_{5-x}Al_xO_{12}$ as Anode Material for Lithium-ion Batteries

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Akari Miwa (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyo-tanabe, Japan), Yoshihiro Wada, Masatsugu Morimitsu

Development of High-capacity and Energy Densities of Metal Hydride-Air Rechargeable Battery

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Alexandre Ponrouch (ICMAB-CSIC, Bellaterra, Spain), M. Rosa Palacín

Optimization of performance through electrode formulation in conversion materials for lithium-ion batteries

s04-128

Myoungho Pyo (Department of Printed Electronics Engineering in World Class University (WCU) Program, Sunchon, Korea), Su Cheol Han, Dongkyu Lee, Kee-Sun Sohn

Lanthanide-doped $LiMn_2O_4$ cathodes for the improvement of electrochemical performances in Li ion batteries

s04-129

Aleksandar Radisic (IMEC, Leuven, Belgium), Daire Cott, Ahmed Etman, Philippe Vereecken

Fabrication of Mn-Oxide/Carbon Nanosheet (CNS) Structures for Energy Storage Applications

s04-130

Kun Shen (Department of Radiation, Radionuclides and Reactors, Faculty of Applied Sciences, Delft University of Technology, Delft, Netherlands), Marnix Wagemaker

The Effect of Particle Size on Lithium-ion Intercalation in Anatase TiO_2

s04-131

Chee Burm Shin (Division of Energy Systems Research, Ajou University, Suwon, Korea), Jaeshin Yi, Young-Jin Hong, Chisu Kim

Three-dimensional Thermal Modeling of a Lithium-ion Battery Pack

s04-132

Koichi Ui (Frontier Materials and Function Engineering, Graduate School of Engineering, Iwate University, Morioka, Japan), Satomi Fukuya, Yoshihiro Kadoma, Naoaki Kumagai, Yuki Umekage, Ramanujam Kumaresan, Minoru Mizuhata

Influence of Binder Types on the Electrochemical Characteristics of SnO_2 Nanoparticle as Negative Electrode for Lithium Secondary Batteries

s04-133

Milica Vujkovic (Faculty of Physical Chemistry, University in Belgrade, Belgrade, Serbia), Ivana Stojkovic, Nikola Cvjeticanin, Slavko Mentus

Electrochemical behavior of $LiFePO_4$/C composite electrode in aqueous $LiNO_3$ solutions

s04-134

Lianbang Wang (College of Chemical Engineering and Material Science, Zhejiang University of Technology, Hangzhou, China), Xiaotan Wu, Jinhan Yao, Chunan Ma

Effects of Li_2CO_3 as a secondary lithium source on the properties of $LiFePO_4$/C composites prepared via solid-state method

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Lianbang Wang (College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou, China), Pinjie Zhang, Jinhan Yao, Chunan Ma

Cu-Sn prepared by electroless reduction as an advanced anode material for lithium-ion batteries

s04-136

Lianbang Wang (College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou, China), Chaoqi Shen, Pinjie Zhang, Shuoshuo Wei, Jinhan Yao, Chunan Ma

Surface modification of spinel $LiMn_2O_4$ by hydrolysis of TEOS

s04-137

Wei Wei (Department of Chemistry, Angstrom Laboratory, Uppsala University, Uppsala, Sweden), Gabriel Oltean, Fredrik Björefors, Leif Nyholm

Optimization of Self-ordered TiO_2 Nanotube Electrodes for Li-ion Microbatteries

s04-138

Tsunenori Yamamoto (Department of Battery Research, Materials Research Center, Hitachi, Japan), Ryo Inoue

Detection for Degradation of Lithium-ion Batteries by Using of Acoustic Emission with Pulse Current

s04-139

Juanyu Yang (R&D Center for Vehicle Battery and Energy Storage, General Research Institute for Nonferrous Metals(GRINM), Beijing, China)

Silicon Nanowires Prepared from Electrolytic Reduction Silicon Dioxide in Molten Salt

s04-140

In-Hyeong Yeo (Department of Chemistry, Dongguk University, Seoul, Korea), Jong-Moon Lee, Won Il Cho, Sun-il Mho

Structure-analysis of Stoichiometric/Nonstoichiometric $LiMn_2O_4$ Electrodes for Li-ion Batteries

s04-141

Aishui Yu (Department of Chemistry, Institute of New Energy, Fudan University, Shanghai, China)

Facile synthesis of TiO_2 nanowire array/Sn composites directly on titanium substrates for improved lithium-ion battery anodes

Pseudo-capacitance

s04-142

Laurence Athouel (Institut des Matériaux Jean Rouxel, Nantes, France), Paul Arcidiacono, Claudia Ramirez-Castro, Claudine Hamel, Olivier Crosnier, Daniel Guay, Daniel Bélanger, Thierry Brousse

Electrochemical Study of Manganese Dioxides by Cavity Microelectrode Technique

s04-143

Carlos Alberto Castro Ruiz (Département de Chimie, Université de Montréal, Montreal, Canada), Dominic Rochefort, Daniel Bélanger

Asymmetric Activated Carbon-MnO_2 Supercapacitors in Protic Ionic Liquids

s04-144

Krzysztof Fic (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), Mikolaj Meller, Grzegorz Lota, Elzbieta Frackowiak

Non-linear Chemical Oscillator Serving as Electrochemical Capacitor

s04-145

Estelle Lebègue (Institut des Matériaux Jean Rouxel (IMN) UMR-CNRS, Nantes, France), Thierry Brousse, Joel Gaubicher, Charles Cougnon

Spontaneous Chemical Modification of Activated Carbon Based on Diazonium Salts *in Situ* Generated by Self-diazotization for Supercapacitors

s04-146

Grzegorz Lota (Institute of Non-ferrous Metals Branch in Poznan, Central Laboratory of Batteries and Cells, Poznan, Poland)

Effect of Lignosulfonates on the Electrochemical Performance of Asymmetric Capacitors

s04-147

Mikolaj Meller (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland), Grzegorz Lota, Krzysztof Fic, Elzbieta Frackowiak

Transition Metal Nitrides and Their Composites with Activated Carbons as Electrodes for Supercapacitors

s04-148

Christine Moustyy (Institut de Chimie de Clermont-Ferrand, ICCF UMR-CNRS 6296 Clermont Université, Université Blaise Pascal, Aubière, France), Pierre Vialat, Fabrice Leroux

Electrochemical Properties of Layered Double Hydroxides containing Ni^{2+} and Co^{2+} cations

s04-149

Vladimir Panic (ICTM, Department of Electrochemistry, University of Belgrade, Belgrade, Serbia), Aleksandar Dekanski, Branislav Nikolic

Iridium Oxide as a Promoter of Pseudocapacitive Performances of Uniformly Dispersed Multicomponent DSA Coatings

s04-150

Jullieth Suarez-Guevara (Centro de Investigación en Nanociencia y Nanotecnología,CIN2 (CSIC), Bellaterra, Spain), Vanesa Ruiz, Pedro Gomez-Romero

Hybrid Materials in Asymmetric Supercapacitors

Solid electrolyte interface

s04-151

Woo Sung Jeon (Center for Computer Simulation and Analytical Science, Samsung Electronics, SAIT division, Yongin, Korea), Changhoon Jung, Hye-Kang Choi, Soon-Ki Jeong

Infrared Microscopic Imaging of Solid Electrolyte Interphase (SEI): The Spatial Distribution of Organic Lithium Carbonates

s04-152

Artem Ulihin (Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia), Nikolai Uvarov, Alexandr Matvienko, Yulia Mateyshina, Semen Serenko

Ionic transport properties of composite solid electrolytes $Li_nX - SnO_2$

s04-152

Martina Nadherna (MEET Battery Research Centre Institute of Physical Chemistry, University of Muenster, Muenster, Germany) Robert Dominko, Jakub Reiter

Ionic liquids compatible with graphite anode of safer Li-ion batteries

Symposium 5: Fuel Cells: Materials, Properties, Performance and Durability

Catalyst

s05-001

Thiago Almeida (Department of Chemistry, Ribeirão Preto, Brazil), Lívia Palma, Adalgisa Andrade

Carbon support effect on the catalytic activity of PtSnRh for ethanol electrooxidation

s05-002

Lorena Alvarez Contreras (Centro de Investigación en Materiales Avanzados, Departamento de Materiales Nanoestructurados, Chihuahua, Mexico), Ivonne Alonso-Lemus, Jose Ysmael Verde-Gomez

Synthesis and characterization of non-conventional support to nanostructured electrocatalysts for use in PEM fuel cells

s05-003

Jamil Ayoub (Instituto de Pesquisas Energéticas e Nucleares, IPEN, CNEN/SP, São Paulo, Brazil)

Preparation of Pt/C, Pt/C-Sb_2O_5•SnO2, Pt/C-In_2O_3•SnO_2 Electrocatalysts by Borohydride Reduction Process for Ethanol Electro-oxidation

s05-004

Claudio Baldizzone (Department of Interface Chemistry and Surface Engineering, Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), Josef C. Meier, Ioannis Katsounaros, Aleksander Kostka, Karl J. J. Mayrhofer

IL-TEM Investigation on Degradation Processes of Carbon Supported Pt-alloy Nanoparticle Catalysts for PEMFC related Applications

s05-005

Stève Baranton (University of Poitiers, IC2MP UMR 7285, CNRS, Poitiers, France), Anne-Claire Ferrandez, Christophe Coutanceau, Jannick Bigarré, Pierrick Buvat

Pt particles functionalized at the molecular level as new nanocomposite materials for PEMFC electrodes

s05-006

Javier Barroso (Universidad del País Vasco, UPV-EHU, Escuela Politécnica de San Sebastián-Donostia, Laboratorio de Química Industrial e Ingeniería Electroquímica, Departamento de Ingeniería Química y Del Medio Amb, San Sebastián, Spain), Ángel R. Pierna, Nicolas Alonso-Vante, Tamara C. Blanco

Metallic Amorphous Alloys with Low Loading of Platinum for Oxygen Reduction Reaction

s05-007

Maryam Borghei (Nanomaterials Group, Department of Applied Physics, Aalto University, Espoo, Finland), Paola Ayala, Ilya Anoshkin, Tanja Kallio, Esko Kauppinen, Virginia Ruiz

Effect of nitrogen doping on carbon nanotubes and nanofibers: Activity for the oxygen reduction reaction

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Stanko Brankovic (Cullen College of Engineering, Univ. of Houston, Houston, USA), Dincer Gokcen, Prania Mohammadi, Ping Liu, Sang Bae

Size Effects in Monolayer Catalysis - Pt Submonolayers on Au(111) via Surface-limited Red-ox Replacement Reaction

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Enric Brillas (Dept. Quimica Fisica, Universitat de Barcelona, Barcelona, Spain), Amado Velázquez-Palenzuela, Conchita Arias, Francesc Centellas, José A. Garrido, Rosa M. Rodríguez, Pere L. Cabot

Carbon-supported Ptshell-Cucore nanoparticles synthetized by electrodeposition/chemical method as CO-tolerant electrocatalysts for polymer electrolyte fuel cells

s05-010

Jeyabharathi Chinnaya (Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), Nejc Hodnik, Marjan Bele, Karl Mayrhofer, Phani Kanala Lakshminarasimha, Stanko Hoèevar

Alloyed $PtCu_3$/C Electrocatalysts for Oxygen Reduction Reaction: Dealloying and Degradation Study

s05-011

Rudy Crisafulli (Instituto de Pesquisas Energéticas e Nucleares, IPEN/CNEN-SP, São Paulo, Brazil)

Preparation of PtSn/C Skeletal-type Electrocatalyst for Ethanol Electro-oxidation

s05-012

Francisco M. Cuevas Muñiz (División de Investigación y Posgrado, Facultad de Ingeniería, Universidad Autónoma de Querétaro, Santiago de Querétaro, Mexico), Noé Arjona, Minerva Guerra-Balcázar, Janet Ledesma-García, Gerardo Arriaga

Electrochemical Synthesis of Shape-controlled Gold structures and their Electrocatalysis For Glucose Electrooxidation

s05-013

Francisco M. Cuevas Muñiz (División de Investigación y Posgrado, Facultad de Ingeniería, Universidad Autónoma de Querétaro, Santiago de Querétaro, Mexico), Minerva Guerra-Balcázar, Janet Ledesma-García, Gerardo Arriaga

PtAg Nanoparticles Highly Tolerant to Glucose in Alkaline Media for Reduction of Oxygen in a Microfluidic Fuel Cell

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R.F.B De Souza (CCNH, Santo Andre, Brazil), J.C.M. Silva, Monica Assumpcao, A.O. Neto, M.C. Santos

PtSnCe/C and PtSn/C + Ce/C Electrocatalysts for Ethanol Oxidation Reaction

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Aleksandar Dekanski (IHTM, Department of Electrochemistry, Beograd, Serbia), Vladislava Jovanovic, Sanja Stevanovic, Amalija Tripkovic, Vladimir Panic

Relationships between Structure and Activity of Carbon as a Multifunctional Electrocatalyst Support

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Christian Durante (Department of Chemical Sciences, University of Padova, Padova, Italy), Marco Favaro, Lorenzo Perini, Stefano Agnoli, Gaetano Granozzi, Armando Gennaro

Pd nanoparticles on HOPG as electrocatalysts for fuel cells: Effect of support doping

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Oscar Alfonso Díaz Morales (Catalysis and Surface Chemistry, Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Marc Koper

Toward understanding oxygen evolution mechanism

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Lyubov Frolova (Institute of Problems of Chemical Physics, Russian Academy of Sciences, Chernogolovka, Russia)

Impact of Oxide Supports Composition on Kinetics and Selectivity of the Catalysts for Direct Alcohol Fuel Cells

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Ahmed Galal (Department of Chemistry, Faculty of Science, Cairo University, Giza, Egypt), Nada Atta, Shimaa Ali, Yasser Abd Al-Rahman

A superior catalytic activity of perovskites prepared by the microwave method toward oxygen evolution

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Snezana Gojkovic (Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia), Maja Obradovic

Electrooxidation of Formic Acid on Pd–Au Surfaces

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Thomas Greszler (General Motors, Honoeye Falls, USA), Puneet Sinha, David Caulk

The Impact of Cathode Platinum Loading on Oxygen Transport Resistance in Polymer Electrolyte Membrane Fuel Cells

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José L. Gómez (Catalysts and Petroleoum chemistry Institute (ICP-CSIC), Madrid, Spain), Francisco J. Pérez, Tirma Herranz, José L. García Fierro, Miguel A. Peña, Mohammed Abdelsalam, Sergio Rojas

Consequences of nanotube support morphology on the activity of Pt-based electrocatalysts for ORR

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Byungchan Han (Energy Systems Engineering, DGIST, Daegu, Korea), Seunghyo Noh, Inhye Kwon, Junkyo Seo

First Principles Study on the Electrochemical Stability and Activity of Nano-scale Pt Alloy

s05-024

Nejc Hodnik (National Institute of Chemistry, Ljubljana, Slovenia), Marjan Bele, Aleksander Reènik, Miran Gaberscek, Stanko Hoèevar

Alloyed $PtCu_3$/C Electrocatalysts for Oxygen Reduction Reaction: Structure Ordering and Activity

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Yan-Xia Jiang (Department of Chemistry, Xiamen University, Xiamen, China), Bin-Win Zhang, Ming-Hui Chen, Shi-Gang Sun

Synthesis and Durability of Highly Dispersed Pt and PtBi Nanoparticles Supported on Ordered Mesoporous Carbon and Their Electrocatalytic Properties

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Jia-Mei Jin (School of Chemistry and Chemical Engineering, Belfast, United Kingdom), C. Hardacre, W. F. Lin, C. A. Ma, Z Y Chan, Y. Q. Chu

Novel Catalysts, Electrode Structure and Membrane Electrode Assembly for Direct Alcohol Fuel Cells

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Vladislava Jovanovic (1ICTM, Department of Electrochemistry, University of Belgrade, Belgrade, Serbia), Sanja Stevanovic, Dusan Tripkovic, Vladimir Tripkovic, Dragica Minic, Aleksandra Gavrilovic, Ksenija Popovic, Amalija Tripkovic

Insight of Sn influence on formic acid oxidation at Pt based catalysts

s05-028

Kensaku Kodama (Toyota Central R&D Labs., Inc., Nagakute, Japan), Ryosuke Jinnouchi, Takahisa Suzuki, Tatsuya Hatanaka, Yu Morimoto

Voltammetric Analysis for Oxide Formation and Reduction on Pt single crystals

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Christian Kulp (Martin-Luther-Universität Halle-Wittenberg, Naturwissenschaftliche Fakultät II Institut für Chemie - Technische Chemie I, Halle (Saale), Germany), Michael Bron

Cu core-Pt shell Catalysts by Direct Electrodeposition: Model studies

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Elizaveta Kuznetsova (Department of Material Science, NTNU, Trondheim, Norway), Petr Krtil

Oxygen evolution on iridium-based oxides: Reaction mechanism and intermediates identification studies

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Fabio H. B. Lima (Institute of Chemistry of Sao Carlos, Sao Carlos, Brazil), Daniel A. Cantane

Ethanol Electro-oxidation Catalyzed by Pd, Pt and Rh in Alkaline Electrolyte. An on-line DEMS study

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Andrew Lin (Department of Chemical and Materials Engineering, Chang Gung University, Kwei-Shan, Tao-Yuan, Taiwan)

The electro-oxidation of solution phase CO on pulse-electro-deposited gold clusters and gold-platinum clusters on glassy carbon RDE

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Jelena Lovic (ICTM, Institute of Electrochemistry, Belgrade, Serbia), Sanja Stevanovic, Ksenija Popovic, Rade Stevanovic, Vladislava Jovanovic, Amalija Tripkovic

Electrocatalytic Properties of Pt Thin Films Electrodeposited onto Bi-Coated GC for Formic Acid Oxidation

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Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Chen Bin Xu, Mei Qin Shi

Pt/WC@ TiO_2 Core-shell structure electrocatalysts and its methanol oxidation

s05-035

Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Xiao Ling Lang, Mei Qin Shi, You Qun Chu

Microwave-heated Synthesis of PtRu/WC Anode Catalyst for Methanol Oxidation Fuel Cell

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Sakthivel Mariappan (Technische Chemie, Karl-Winnacker-Institut, DECHEMA e.V., Frankfurt am Main, Germany), Sakthivel Mariappan, Carolina Galeano, Ferdi Schüth, Jean-Francois Drillet

Activity of HGS-supported Pt-Au Catalysts for ORR in Absence and Presence of Methanol

s05-037

Livia Martins da Palma (Departamento de Quimica, Faculdade de Filosofia Ciencias e Letras de Ribeirao Preto, Universidade de Sao Paulo, Ribeirao Preto, Brazil), Thiago dos Santos Almeida, Adalgisa Rodrigues de Andrade

Different routes for the synthesis of Pd and PdSn/C nanoparticles by microwave-assisted heating and their use in glycerol electro-oxidation

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Jun Maruyama (Environmental Technology Research Division, Osaka Municipal Technical Research Institute, Osaka, Japan), Tsutomu Shinagawa, Zyun Siroma, Atsushi Mineshige

Carbonaceous thin film containing N-coordinated Fe and Co with catalytic activity for oxygen reduction

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Sladjana Maslovara (Vinca Institute of Nuclear Science, Belgrade, Serbia), Vladimir Nikolic, Milica Marceta Kaninski, Dragana Zugic, Snezana Miulovic, Gvozden Tasic, Ivana Perovic, Djordje Saponjic

Transition Metal-based Low-platinum Electrocatalysts for the PEMFC

s05-040

Natalia Mayorova (Frumkin Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia), Olga Khazova

Pt@Pd/C Core-Shell Structures as Catalysts for the ORR

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Josef C. Meier (Interface Chemistry and Surface Engineering, Max-Planck-Insitut für Eisenforschung, Düsseldorf, Germany), Carolina Galeano, Ioannis Katsounaros, Angel A. Topalov, Ferdi Schüth, Karl J. J. Mayrhofer

IL-TEM and IL-Tomography Stability Investigations of Fuel Cell Catalysts

s05-042

Alla Mikhailova (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia), Olga Khazova

Catalytic Activity of Pt-Ru@Pb/C and Pt-Ru@Ni/C Electrodes in Methanol Oxidation Reaction

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Maria de los Angeles Montero (PRELINE, Facultad de Ingenieria Quimica, Universidad Nacional del Litoral, Santa Fe, Argentina), Maria Rosa Gennero de Chialvo, Abel Cesar Chialvo

Evaluation of the Catalytic Activity of Faceted Platinum Nanostructured Electrodes for Hydrogen Oxidation Reaction

s05-044

Maria de los Angeles Montero (PRELINE, Facultad de Ingenieria Quimica, Universidad Nacional del Litoral, Santa Fe, Argentina), Tine Brülle, Holger Wolfschmidt, Ulrich Stimming

Study of the Catalytic Activity towards Hydrogen Related Reactions of Platinum Nanostructures Deposited on Silver Substrates

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Juan Carlos Morales-Gomero (Laboratorio de Electroquímica Aplicada, Facultad de Ciencias, Universidad Nacional de Ingeniería, Lima, Peru), Pilar Ocón, Enrique Fatás, Adolfo La Rosa Toro

Palladium electrodeposition on high-surface-area nanoporous gold for ethanol electro-oxidation in alkaline media

s05-046

Masatoshi Nagai (Tokyo University of Agriculture and Technology, Koganei, Japan), Shammi Mst

Ash-free Brown Coal as a Cathode Catalyst for Polymer Electrolyte Fuel Cell

s05-047

Abu Bakr Ahmed Amine Nassr (Martin-Luther-Universität Halle-Wittenberg, Naturwissenschaftliche Fakultät II Institut für Chemie, Technische Chemie I, Halle (Saale), Germany), Michael Bron

Microwave Assisted Ethanol Reduction (MAER) as a New Method for Preparation of Highly Active and Stable Carbon Nanotubes Supported PtRu Electrocatalysts for Methanol Oxidation Reaction

s05-048

Vladimir Nikolic (Vinca Institute of Nuclear Sciences, Belgrade, Serbia)

Development of the ultra-low Pt loading at tungsten carbide catalyst support for the PEMFC

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Maja Obradovic (Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia), Biljana M. Babic, Velimir R. Radmilovic, Nedeljko V. Krstajic, Snezana Gojkovic

Electrocatalytic activity of Pt nanoparticles supported on core-shell structured tungsten-tungsten carbide

s05-050

Kalliopi Maria Papazisi (Chemical Process Engineering Research Institute, Centre for Research and Technology Hellas, Thessaloniki, Greece), Stella Balomenou, Dimitrios Tsiplakides

Ir-based Oxides for PEM Water Electrolysis

s05-051

Katarzyna Piekielska (Martin-Luther-Universität Halle-Wittenberg, Naturwissenschaftliche Fakultät II Institut für Chemie, Technische Chemie I, Halle (Saale), Germany), Pei Wang, Michael Bron

Hierarchically Structured Electrodes Based on CNT-modified Carbon Surfaces

s05-052

Ksenija Popovic (ICTM, Department of Electrochemisry, Belgrade, Serbia), Sanja Stevanovic, Dusan Tripkovic, Jelena Rogan, Jelena Lovic, Amalija Tripkovic, Vladislava Jovanovic

Ehanol oxidation on carbon supported platinum based bimetallic catalysts synthesized by microwave assisted polyol procedure

s05-053

Stefan Rudi (Department of Chemistry, Chemical Engineering Division, The Electrochemical Energy, Catalysis, and Materials Science Laboratory, Technical University Berlin, Germany), Xenia Tuaev, Peter Strasser

Electrocatalytic oxygen reduction on dealloyed $Pt_{1-x}Ni_x$ alloy nanoparticle electrocatalysts

s05-054

Celine Ruediger (Physik Department E19 and Institute for Advanced Study (IAS), Technische Universitaet Muenchen, Garching, Germany), Jassen Brumbarov, Filippo Maglia, Silvia Leonardi, Matthias Sachsenhauser, Ian D. Sharp, Odysseas Paschos

TiO_xC_y based supports for application in electrocatalysis

s05-055

Morihiro Saito (Department of Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe-shi, Japan), Tatsuya Takakuwa, Takuya Kenko, Hideo Daimon, Akimasa Tasaka, Minoru Inaba, Hidenobu Shiroishi, Takeo Hatai, Jun Kuwano

Novel Oxygen Reduction Electrocatalysts Based on Lanthanum Manganites and Their Application to the Cathode of AEMFCs

s05-056

Annukka Santasalo-Aarnio (Department of Chemistry, Aalto University, Aalto, Finland), Sami Tuomi, Kyösti Kontturi, Tanja Kallio

New electrochemical approach to characterization of anode catalyst for direct alcohol fuel cell (DAFC)

s05-057

Alexander Schenk (Institute of Chemical Engineering and Environmental Technology, Graz University of Technology, Graz, Austria), Markus Perchthaler, Astrid Stadlhofer, Christoph Grimmer, Viktor Hacker

Stable and Active ORR Catalysts for HT PEMFCs

s05-058

Anna K. Schuppert (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), Angel A. Topalov, Alan Savan, Sebastian O. Klemm, Alfred Ludwig, Karl J.J. Mayrhofer

Fast Screening of PEMFC-Catalysts with a Scanning Flow Cell System

s05-059

Joonkyo Seo (Department of Energy Systems Engineering, DGIST, Daegu, Korea), Byungchan Han

First-Principles Approach on the Electrochemical Dissolution Processes of Pt Nanocatalysts

s05-060

Hugo B. Suffredini (CCNH, Federal University of ABC, Santo André, Brazil), Guilherme S. Buzzo, Rodrigo F. B. De Souza, Almir Oliveira Neto, Mauro C. Santos

On the Performance of a Direct Formic Acid Fuel Cell Using a Pt-PbOx/C Anode as Catalyst

s05-061

Kaido Tammeveski (Institute of Chemistry, University of Tartu, Tartu, Estonia), Kristel Jukk, Nadezda Alexeyeva, Christoffer Johans, Kyösti Kontturi

Oxygen Reduction on Pd Nanoparticle/Multi-walled Carbon Nanotube Composites

s05-062

Germano Tremiliosi-Filho (Instituto de Quimica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos, Brazil), Amanda Cristina Garcia, Luiz Henrique da Silva Gasparotto, Janaina Fernandes Gomes

Oxygen Reduction Reaction on Carbon-Supported Ag Nanoparticles

s05-063

Amalija Tripkovic (ICTM, Institute of Electrochemistry, University of Belgrade, Belgrade, Serbia), Jelena Lovic, Maja Obradovic, Dusan Tripkovic, Ksenija Popovic, Vladislava Jovanovic, Snezana Gojkovic

High Activity and Stability of Pt_2Bi Catalyst in Formic Acid Oxidation

s05-064

Fernanda Trombetta da Silva (Department of Physics Chemistry, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil), Emilse Maria Agostini Martini, Michèle Oberson de Souza, Ana Cristina Gobo, Vicenti Dalmazzo, Roberto Fernando de Souza

Co-catalytic effect of nickel in PtxNiy/C electrocatalysts for oxygen electroreduction

s05-065

Xenia Tuaev (Department of Chemistry, The Electrochemical Energy, Catalysis and Materials Science Laboratory, Berlin, Germany), Stefan Rudi, Armin Hoell, Valeri Petkov, Peter Strasser

In situ structural investigations on alloy nano particle catalysts during electrocatalysis

s05-066

Elena Tusseeva (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia), Olga Khazova, Vladimir Ivanov

Ultrathin Platinum Layers Incorporated into Polymers Supported at Carbon Nanotubes

s05-067

Kersti Vaarmets (Institute of Chemistry, University of Tartu, Tartu, Estonia), Jaak Nerut, Enn Lust

Mo_2C derived carbons catalysts and/or supports for Pt metal catalysts for PEMFC

s05-068

Jose Ysmael Verde-Gomez (Instituto Tecnologico de Cancún, Cancun, Mexico), Mario Miki Yoshida, Jiwei Ma, Nicolas Alonso-Vante

Stability and CO Oxidation on Pt Nanoparticles Deposited onto MWCNT

s05-069

Codruta Vlaic ("Babes-Bolyai" University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania), Carla Gouveia-Caridade, Petru Ilea, Christopher Brett

MnO_2 Modification of Graphite for Oxygen Reduction Reaction

s05-070

Toshimasa Wadayama (Department of Materials Science, Graduate School of Engineering, Tohoku University, Sendai, Japan), Yuki Iijima, Yu Takahashi, Kenichi Matsumoto, Naoto Todoroki

Electrochemical Properties for MBE-prepared Pt/Au(111) Single Crystal Surfaces

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Seunghee Woo (Department of Chemistry, Seoul National University, Seoul, Korea), Jaeyoung Lee, Seung-Keun Park, Hasuck Kim, Taek Dong Chung, Yuanzhe Piao

Design of Graphene-Vulcan Carbon Composite for Enhanced PtRu Electrocatalysts

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Hirohisa Yamada (Department of Chemical Engineering, Nara National College of Technology, Yamatokoriyama, Japan)

Electrochemical Stability of Pt ML on Au/QC Electrode

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Jose H. Zagal (Facultad de Quimica y Biologia, Universidad de santiago de Chile, Santiago, Chile), Ricardo Venegas

Correlations between the Cu(II)/(I) formal potential of copper phenanthrolines confined on graphite and their electrocatalytic activity for the reduction of O_2

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Yann Bultel (GINP, Saint Martin d'Hères, France), Sophie Didierjean, Thierry Geneston, Pierre-Xavier Thivel, Florence Druart

Local Cell Voltage Decrease within a PEMFC Stack under Low Current Density Operation

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Injun Jang (Department of Chemical Engineering, Inha University, Incheon, Korea), Minseo Kim, Imgon Hwang

Attenuated degradation of PEMFC cathode during fuel starvation by using carbon-supported IrO_2

s05-076

Jong-Won Lee (Fuel Cell Research Center, Korea Institute of Energy Research, Daejeon, Korea), Seuk-Hoon Pi, Seung-Bok Lee, Tak-Hyoung Lim, Seok-Joo Park, Rak-Hyun Song, Dong-Ryul Shin

Durability of Anode-supported Flat-Tubular SOFCs with Ag-Infiltrated Cathodes

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Júlio César M. Silva (CCNH, Universidade Federal do ABC, Santo André, Brazil), Lais Sue Yamada, Rodrigo Chelegão, Rodrigo Fernando B. De Souza, Luanna Silveira Parreira, Marcelo Luiz Calegaro, Cassiana S. Nomura, Mauro C. Santos

PtSn/C Prepared by Two Different Methods for Ethanol Oxidation Reaction: A Degradation Study

s05-078

Alejandro Oyarce (Department of Applied Electrochemistry, KTH Royal Institute of Technology, Stockholm, Sweden), Erik Zakrisson, Matthew Ivity, Andreas Bodén, Carina Lagergren, Göran Lindbergh

Start-up and shut-down strategies for PEMFC

s05-079

Markus Perchthaler (ELCOMAX GmbH, Munich, Germany), Viktorija Juhart, Manfred Stefener, Viktor Hacker

Durable anode catalyst support materials for High Temperature PEM Fuel Cells

s05-080

Zhuoxiang Zhang (Paul Scherrer Institute, Villigen, Switzerland), Kaewta Jetsrisuparb, Alexander Wokaun, Lorenz Gubler

Performance and Degradation of Radiation Grafted Poly (Styrene Sulfonic Acid-co-Methacrylonitrile) Membranes in the Fuel Cell

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Kyung Don Baik (Mechanical Engineering Department, Seoul, Korea), Min Soo Kim

Effect of GDL's anisotropic behavior on the GDL intrusion in PEMFCs

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Nicky Bogolowski (Karl-Winnacker-Instut, DECHEMA e.V., Frankfurt a.M., Germany), Jean-Francois Drillet

Development of MEAs for Portable Energy Supply on the Basis of a μ-DMFC

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Edward Brightman (National Physical Laboratory, London, United Kingdom), Gareth Hinds

In Situ Study of PEMFC Startup/Shutdown Degradation Using a Through-plate Reference Electrode Array

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Min-Hsing Chang (Department of Mechanical Engineering, Tatung University, Taipei, Taiwan), Guan-Min Huang

Effects of Gas Diffusion Layer with Double-faced Microporous Layer Coating on the Performance of a PEM Fuel Cell Under Different Air Inlet Relative Humidity

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Yohann Chatillon Chatillon (LRGP, CNRS, Nancy, France), Bo Tao Huang, Caroline Bonnet, François Lapicque

PEMFC stack containing a defected cell: Use of a new stack diagnostis tool for long term aging

s05-086

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Novel Pt Nanocatalysts on Tungsten-based Supports for Oxygen Reduction Reaction in Acid Solution

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Kuan-Zong Fung (Department of Materials Science and Engineering, National Cheng Kung University, Tainan City, Taiwan), Chi-Yang Liu, Chung-Ta Ni, Shu-Yi Tsai

Interdiffusion Analysis for Reaction between $La_{0.7}Sr_{0.3}VO_3$ (LSV) Anode and YSZ Electrolyte on SOFC Applicaitons

s05-088

George Georgiou (Department of Electrical Engineerin, Technological Education Institute (TEI) of West Macedonia, Kozani, Greece), Efthimios Papastergiadis

Fabrication of Cu-cermets as potential anodes for Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs) with Yttria Stabilized Zirconia (YSZ) electrolyte

s05-089

I-Ming Hung (Department of Chemical Engineering and Materials Science, Yuan Ze University, Taoyuan, Taiwan), Yu-Chen Lee, Yan-Yan Lien

The Effect of Humidity on Electrochemical Properties of $BaCe_{0.8-x}Zr_xY_{0.2}O_{3-\delta}$ Solid Oxide Fuel Cell Electrolyte

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I-Ming Hung (Department of Chemical Engineering and Materials Science, Yuan Ze University, Taoyuan, Taipei, Taiwan), Jia-Wei Chen

Oxidation Behavior and Electrical Properties of Clad Metallic Interconnect for SOFC at High Temperature

s05-091

Petri Kanninen (Department of Chemistry, Aalto University, Helsinki, Finland), Maryam Borghei, Annukka Santasalo-Aarnio, Virginia Ruiz, Esko I. Kauppinen, Tanja Kallio

The Effect of Nafion Content in a Graphitized Carbon Nanofiber Catalyst Layer of a Direct Methanol Fuel Cell Anode

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Effect of freeze/thaw cycles and gas purges on the performance degradation of direct methanol fuel cell

s05-093

Dmitrii Korolev (Sankt Petersburg State University, Saint Petersburg, Russia), Natalia Chezhina

Concept of Clustering on Solving the Problems of Electronic Structure of Doped Lanthanum Gallate and its Conductivity: A Fresh Point of View on an Old Problem

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Seungbok Lee (Fuel Cell Research Center, Korea Institute of Energy Research, Daejeon, Korea), Seuk-Hoon Pi, Jong-Won Lee, Tak-Hyoung Lim, Seok-Joo Park, Rak-Hyun Song

Lanthanum Chromite-Glass Composite Materials for Solid Oxide Fuel Cell Interconnects

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ORR Kinetics Identification with Total Harmonic Distortion Spectroscopy for PEMFC Cathode

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Hiroyuki Mieda (University of Hyogo, Himeji, Japan), Atsushi Mineshige, Takahiro Funahashi, Yusuke Daiko, Hideki Yoshioka, Tetsuo Yazawa

Electrochemical property of $(La,Sr)(Co,Fe)O_3$ on lanthanum silicate-based oxygen excess-type solid electrolyte

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Ehab Mostafa (Department of Electrochemistry, University of Bonn, Bonn, Germany)

Quasi Continuous Determination of the Symmetry Factor Using Potential Modulation Technique under Convection Conditions

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Yoshihiro Mugikura (Central Institute of Electric Power Industry, Yokosuka, Japan), Kenji Yasumoto, Hiroshi Morita, Masahiro Yoshikawa, Tohru Yamamoto

Performance evaluation technology for long-term durability and reliability of SOFCs

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Tatsuhiro Okada (Tsukuba Fuel Cell Laboratory, Inc., Tsukuba, Japan), Mutsumasa Kyotani, Shin-iti Kimura, Satoshi Matsushita, Kazuo Akagi

Washi (Japanese paper) Derived Porous Carbon Sheets as GDL for Polymer Electrolyte Fuel Cells

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Emma Ortega (Universidad Politecnica de Valencia, Dpto. Ingenieria Quimica y Nuclear IEC Group, Valencia, Spain), María Pérez-Page, Valentín Pérez-Herranz

Study of the Effect of Temperature on a 300 W PEM Fuel Cell Stack by Electrochemical Impedance Spectroscopy

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Jin-Soo Park (Department of Environmental Engineering, Sangmyung University, Cheonan, Korea), Mun-Sik Shin, Moon-Sung Kang, Yang-Hoon Kim, Young-Woo Choi

Role of Crosslinked Quaternized Polymers in Fuel Cell Electrodes and Their Electrochemical Characterization

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Jin-Soo Park (Department of Environmental Engineering, Sangmyung University, Cheonan, Korea), Young-Jun Byun, Mun-Sik Shin, Moon-Sung Kang, Yang-Hoon Kim

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Luanna Parreira (Universidade Federal do ABC, Santo andré, Brazil), Aline Amorim, Júlio César Silva, Rodrigo Souza, Fábio Simões, Mauro Santos

Electrocatalytic Effect of Pt_3Sn_1/MWCNT for Mixed Ethanol: Methanol Solutions Oxidation

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Carmen M. Rangel (Fuel Cells and Hydrogen Unit, Lisboa, Portugal), Vitor V. Lopes, Augusto Q. Novais, Raquel A. Silva

Impedance Data Analysis of a PEM Fuel Cell Using the Distribution of Relaxation Times Representation

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Jahan Bakhsh Raoof (University of Mazandran, Babolsar, Iran), Reza Ojani, Sayed Reza Hosseini

A Comparative Study of Electrocatalytic Oxidation of Formaldehyde at the Surface of Pt Nanoparticles Modified Poly(m-Toluidine)/Triton X-100/MCNTPE in Acidic and Alkaline Media

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Tadyos Tesfu-Zeru (Karl-Winnacker-Institut der DECHEMA e.V., Frankfurt , Germany)

Effect of hollow graphitized spheres supported Pt cathode catalyst on MEA performance in a middle temperature DMFC

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Yuzhen Xia (LRGP - CNRS, Nancy, France), Nathalie Hugot, Alexandre Desforges, Jean Francois Marêché, Caroline Bonnet, Francois Lapicque

Sulfonate-functionalised carbon support for PEMFC electrodes – Half cell investigations

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Sami Tuomi (Department of Chemistry, Aalto University, Espoo, Finland), Tanja Kallio

Alkaline Methanol Electrolysis

Membrane

s05-109

Kevin Cooper (Scribner Associates, Inc., Southern Pines, USA), Thomas Steenberg, Hans A. Hjuler

Characterizing the Through-plane Conductivity of Commercial PBI Fuel Cell Membrane

s05-110

Wiebke Germer (NEXT ENERGY - EWE-Forschungszentrum für Energietechnologie e. V., Oldenburg, Germany), Carolina Nunes Kirchner

Dynamic Mechanical Analysis of Anion Exchange Membranes for Use in Alkaline Anion Exchange Membrane Fuel Cells

s05-111

Noelia Ruiz Jimenez (Department of Chemical Engineering and Environment, University of the Basque Country (UPV/EHU), San Sebastian, Spain), Angel R. Pierna, Agustin Lorenzo, Javier Barroso, Tamara C. Blanco, Maialen Sanchez, Eider Artutxa

$Ni_{59}nb_{40}pt_{0.6}x_{0.4}$ (X= Pd, Rh, Co) Amorphous Catalysts as Anodes, Supported on Membranes Nafion 117 for Pemfc

s05-112

Astrid Stadlhofer (Institute of Chemical Engineering and Environmental Technology, Graz University of Technology, Graz, Austria), Alexander Schenk, Viktor Hacker

Development and characterization of anion exchange membranes for direct ethanol fuel cells

s05-113

Hirokazu Takahashi (University of Hyogo, Himeji, Japan), Atsushi Mineshige, Takayoshi Morikane, Yusuke Daiko, Tetsuo Yazawa

Ionic conductivity of oxyapatite-type silicate glass ceramics

s05-114

Fabio Zuluaga (Departamento de Química, Universidad del Valle, Cali, Colombia), Yulia Montealegre-Martínez, Sandra Jaramillo-García, Rubén Vargas, William Lizcano-Valbuena

Membranes Based in Nafion with PBI, ABPBI and Chitosan as Polymer Electrolytes for DEFC

s05-115

Fabio Zuluaga (Departamento de Química, Universidad del Valle, Cali, Colombia), Sandra Jaramillo-García, Yulia Montealegre-Martínez, Felipe Bedoya, Rubén Vargas, Andrés Rodríguez-Marmolejo, William Lizcano-Valbuena

Preparation of Polymeric Electrolytes Containing Nafion®, Chitosan And Polyvinyl Alcohol for DEFC

Modeling

s05-116

Qiong Cai (Imperial College London, London, United Kingdom), Farid Tariq, Vladimir Yufit, Khalil Rhazaoui, Mahendra Somalu, Nigel Brandon

D microstructure modeling combined with FIB-SEM for electrochemical characterization of SOFC anodes

Organic fuels

s05-117

David Harrington (Department of Chemistry, University of Victoria, Victoria, Canada), Robert Sacci

Oxidation of Formic Acid at Pd Electrodes

s05-118

Paulo Olivi (Departamento de Quimica, FFCLRP Universidade de São Paulo, USP, Ribeirão Preto-SP, Brazil), Fabiana Purgato

Performance of Pt/C, PtRu/C and PtSn/C catalysts in direct formaldehyde fuel cell

Catalyst

s05-119

Seulki Kim (Department of Chemistry and Institute of Basic Science, Gwangju, Korea), Daekun Kim, Seungwon Jeon

Improved Electrocatalytic Effect of Bonded Carbon Nanomaterials with Anchoring Co-TAPP

Symposium 6: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Computational electrochemistry

s06-001

Jeanet Conradie (Department of Chemistry, Bloemfontein, South Africa), Nomampondomise Stuurman-Molefe

Density Functional Theory calculations as a tool to understand the cyclic voltammogram of gamma substituted β-diketones

s06-002

Alejandro A. Franco (Alternative and Atomic Energies Commission of France (CEA), LITEN/DEHT/LCPEM, Grenoble, France)

A general physical multiscale simulation methodology for the lifetime prediction of electrochemical energy storage devices

s06-003

Mohammadreza Karamad (Technical University of Denmark, Lyngby, Denmark)

Modeling CO electroxidation at bimetallic surfaces from first principles calculations

s06-004

Jonathan E. Mueller (Institut für Elektrochemie, Universität Ulm, Ulm, Germany), Timo Jacob, Ludwig Kibler

Disentangling Lattice Strain and Ligand Effects: Competing Influences on the Catalytic Properties of Pt(111) Epitaxial Layers on Pt/Ru Substrates

s06-005

Seunghyo Noh (Energy Systems Engineering, DGIST, Daegu, Korea), Byungchan Han

The Electrochemical Stability of Nano-scale Pt-Co alloy catalysts by Ab-initio Study

s06-006

Angel Perez Manso (University of Basque Country, Department of Graphic Expression and Eng. Projects, San Sebastián, Spain), Florencio Fernandez Marzo, Mikel Garmendia Mujika

Alternative Designs to Serpentine Flow Fiels in the Design of Bipolar Plates for PEMFC

s06-007

Samira Siahrostami (Department of Physics, Lyngby, Denmark), Jan Rossmeisl, Vladimir Tripkovic, Jens Nørskov

First Principle Investigation of Zinc-anode Dissolution in Zinc/Air Battery

Energy storage and coversion

s06-008

Visnja Horvat-Radosevic (Rudjer Boskovic Institute, Zagreb, Croatia), Katja Magdic, Kresimir Kvastek

Impedance modeling of ruthenium-modified glass-like carbon electrodes

s06-009

Jean-Claude Njodzefon (Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruher Institut für Technik, Karlsruhe, Germany), André Weber, Ellen Ivers-Tiffée

Electrochemical Studies on Anode-supported Solid Oxide Electrolyzer Cells (SOEC)

Multi-scale modeling

s06-010

Jonathan Deseure (LEPMI, SMH, France), Olivier Doche, Yann Bultel

Steam permeation in regenerative Protonic Ceramic Fuel Cell

s06-011

Pablo Daniel Giunta (CEA (Atomic and Alternative Energies Commission), DRT/LITEN/DETH, Laboratory of Components for Fuel Cells and Electrolyzers, and of Modeling, Grenoble, France), Alejandro A. Franco

Simulating the impact of heterogeneous operation conditions on PEMFC performance and durability: A multiscale approach

s06-012

Dong Hyup Jeon (College of Energy and Environment, Dongguk University, Gyungju, Korea), Seung Man Baek, Jung Ho Kang, Jin Hyun Nam

Numerical Simulation of Electrolyte Impregnation Process in Porous Electrodes of Lithium-ion Batteries

s06-013

Payam Kaghazchi (Institut für Elektrochemie, Universität Ulm, Ulm, Germany)

Oxygen-induced Roughening of Pt Nanoparticles

s06-014

Sang Gun Lee (School of Mechanical and Aerospace Engineering, Seoul National University, Seoul, Korea), Kwang Nam Kim, Jung Ho Kang, Jin Hyun Nam, Hyung Min Kim, Charn-Jung Kim

Two-Dimensional Lattice Boltzmann Simulation for Liquid Water Transport in Hydrophobic Porous Layers of Polymer Electrolyte Membrane Fuel Cells

s06-015

Mostafa Mesgar (Institute of Electrochemistry, Ulm, Germany), Jonathan E. Mueller, Timo Jacob

Island formation on gold surfaces in presence of coadsorbed chlorine

s06-016

Jin Hyun Nam (School of Mechanical and Automotive Engineering, Daegu University, Gyungsan, Korea), Seung Man Baek, Sangho Sohn, Dong Hyup Jeon

Micro/Macroscale Model Development for Anode-supported Planar Solid Oxide Fuel Cells

s06-017

Akos Nemes (Department of Physical Chemistry, Institute of Chemistry, Eötvös Loránd University, Budapest, Hungary), Akos Kriston, György Inzelt

Analysis of the porosity, agglomerates' size and exchange current density of a PEMFC by using a two-dimensional model

s06-018

Jochen Zausch (Fraunhofer Institute for Industrial Mathematics, Kaiserslautern, Germany), Arnulf Latz

From Micro to Macro – Modeling and Simulation of Lithium-ion Batteries on Multiple Scales

Physicochemical modeling

s06-019

Jan Philipp Brinkmann (Institute of Energy and Climate Research – Fuel Cells (IEK – 3), Jülich, Germany), Dieter Froning, Werner Lehnert, Uwe Reimer, Detlef Stolten

Realistic Fibrous Microstructures in Fuel Cells – 3D Modeling of Two-component Gas Flow by Using the Lattice Boltzmann Method

s06-020

Isai Gonzalez Martinez (Otto-von-Guericke University Magdeburg, Magdeburg, Germany), Tanja Vidakovic-Koch, Kai Sundmacher

Interrelation of Catalyst Layer Parameters for More Physically Eeasonable Gas Diffusion Electrode Modeling

s06-021

Richard Hanke-Rauschenbach (Max Planck Institute for Dynamics of Complex Technical Systems, Magdeburg, Germany), Peter Heidebrecht, Andreas Jörke, Kai Sundmacher

Cascade of oscillating electrochemical converters for deep CO-removal from H_2/CO-mixtures: A model-based design approach

s06-022

Alexey Levchenko (Instituite for Problems of Chemical Physics RAS, Chernogolovka, Russia), Alexander Ukshe

Model of the processes on the heterogeneous gas electrodes

s06-023

Aline Lima da Silva (Program of Postgraduate Studies in Mining, Metals and Materials Engineering (PPGE3M), Federal University of Rio Grande do Sul, UFRGS, Porto Alegre, Brazil), Luís Frederico P. Dick, Iduvirges Lourdes Müller

Sulphur-tolerant anode materials for SOFCs running on natural gas, biogas or liquefied petroleum gas (LPG) – A theoretical investigation into the effect of CeO_2 addition on H_2S-poisoning of Ni-based anodes

s06-024

Pierre-Éric Alix Melchy (Department of Chemistry, Simon Fraser University, Burnaby, Canada), Michael Eikerling

Theory of Ionomer Aggregation in Polymer Electrolyte Membranes

s06-025

Wendelin Waiblinger (German Aerospace Center, Stuttgart, Germany), Josef Kallo, Kaspar Andreas Friedrich

Evaluation of Reformate Fed HTPEFC-System Performance - Experiment and Simulation

Symposium 7: Cathodic and Anodic Routes to Electrochemical Fabrication

Anodic oxidation

s07-001

Liana Anicai (Politechnica University of Bucharest, Center of Surface Science and Nanotechnology, Bucharest, Romania), Aurora Petica

Anodic dissolution of Ti in choline chloride based ionic liquids – A new route for TiO_2 nanopowder synthesis

s07-002

Ivana Cesarino (University of São Paulo, São Carlos, Brazil), Vivian Cesarino, Fernando Moraes, Sergio Machado

Electrochemical Degradation of Benzene in Natural Water Using Silver Nanoparticle-decorated Carbon Nanotubes

s07-003

Justyna Czupryniak (University of Gdansk, Gdansk, Poland), Aleksandra Fabianska, Robert Bogdanowicz, Ewa Siedlecka, Tadeusz Ossowski

Modified Boron-doped Diamond Electrode for Electrochemical Oxidation

s07-004

Dora Alicia Garcia Osorio (Facultad de Química, Universidad Nacional Autónoma de México, Distrito Federal, Mexico)

SnO_2-Carbon black composite electrodes as anode materials

s07-005

Ignacio González (Departamento de Química, Universidad Autónoma Metropolitana-Iztapalapa, Ciudad de México, Mexico), Próspero Acevedo-Peña

In-situ electrochemical study of the F- ion insertion during formation of TiO_2 nanotubes by anodization in aqueous medium

s07-006

Sabina Grigorescu (University Politehnica of Bucharest, Bucharest, Romania), Camelia Ungureanu, Patrik Schmuki, Ioana Demetrescu

Antibacterial Activity of TiO_2 Nanotubes Formed Via Anodizing in Two Steps on TiZr Surface

s07-007

Agnieszka Kaczmarek (University of Zielona Gora, Mechanical Department, Zielona Gora, Poland), Katarzyna Arkusz, Elzbieta Krasicka-Cydzik

Vanadium oxide-rich nanotubes on both phases of anodized Ti_6Al_4V alloy

s07-008

Ning Liu (Department of Materials Science and Engineering, University of Erlangen-Nuremberg, D-91058 Erlangen, Germany), Zdenek Hubicka, Josef Krysa, Kiyoung Lee, Patrik Schmuki

Photo-electrochemical Study of TiO_2 Nanotubes by Anodization of Sputtered Titanium Films

s07-009

Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Zai Xiang Lu, Ying Hong Zhu, Hong Yan Zeng

Electro-synthesis of anisaldehyde on modified Carbon nanotubes electrode

s07-010

Anca Mazare (University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Bucharest, Romania), Daniela Ionita, Ioana Demetrescu

Influence of Anodizing Conditions on Morphology and Stability of Ti_6Al_7Nb TiO_2 Nanotubes in Organic Electrolytes

s07-011

Ilya Roslyakov (Department of Materials Science, M.V. Lomonosov Moscow State University, Moscow, Russia), Kirill Napolskii, Anna Romanchuk, Olesya Kapitanova, Alexey Mankevich, Vasily Lebedev, Andrey Eliseev

Origin of Long-range Pore Ordering in Anodic Films on Aluminum

s07-012

Dmitry Solovei (Department of Microelectronics, Faculty of Electrical Engineering and Communication, Brno University of Technology, Brno, Czech Republic), Jaromir Hubalek, Alexander Mozalev

The growth and dielectric properties of porous-anodic-alumina-supported nanostructured Ta_2O_5/Ta films

s07-013

Ralph Sueptitz (IFW-Dresden, Dresden, Germany), Christian Becker, Margitta Uhlemann, Jürgen Eckert, Annett Gebert

Micro-patterning of a Fe-based Bulk Metallic Glass by Transpassive Electrochemical Micromachining

s07-014

Leszek Zaraska (Department of Physical Chemistry & Electrochemistry, Faculty of Chemistry, Jagiellonian University, Krakow, Poland), Natalia Czopik, Dolores Stoklosa, Michal Bobruk, Grzegorz Sulka, Marian Jaskula

Nanoporous tin oxide layers fabricated by simple anodization technique

Electrodeposition

s07-015

Miriam Aguilar-Sánchez (Departamento de Materiales, Universidad Autónoma Metropolitana, México, Mexico), Israel Rodriguez-Torres, Manuel Palomar-Pardavé, Mario Romero-Romo

Iron electrodeposition in sulphate media: Transient analysis

s07-016

Tzvetanka Boiadjieva-Scherzer (CEST, Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria), Lidia Mirkova, Milko Monev, Hermann Kronberger, Thomas Steck

Electrodeposition of Zn-Cr Alloy Coatings: Hydrogen Permeation

s07-017

Agustín E, Bolzán (Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas, La Plata, Argentina)

Electrodeposition of Copper on Glassy Carbon Electrodes in the Presence of Picolinic Acid

s07-018

M.J. Carmezim (Instituto Politecnico de Setubal, ESTSetubal, Setubal, Portugal), R. Silva, S. Eugenio, T.M. Silva, M.F. Montemor

Electrodeposition of Nanostructured Co-Ni Porous Films

s07-019

Sandro Cattarin (Institute for Energetics and Interphases (IENI)-CNR, Padova, Italy), Luca Mattarozzi, Nicola Comisso, Paolo Guerriero, Marco Musiani, Lourdes Vazquez-Gomez, Enrico Verlato

Preparation of Cu-Ni alloy electrodes and their use for nitrate reduction in alkaline media

s07-020

Tso-Fu Mark Chang (Precision and Intelligence Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Chiemi Ishiyama, Donald W. Kirk, Masato Sone

Periodic-Plating-Characteristic of Electroplating with Supercritical Carbon CO_2 Emulsion

s07-021

Margarita Dergacheva (Institute of Organic Catalysis and Electrochemistry, Almaty, Kazakhstan)

The preparation of $CuInSe_2$ thin film by the interior electrolyze method

s07-022

Stefanie Drensler (Johannes Kepler University Linz, Institute for Chemical Technology of Inorganic Materials, Linz, Austria), Johanna Novacek, Achim Walter Hassel

Low-content hydrogen reference material prepared through electrodeposition of zinc

s07-023

Humberto Gomez (Instituto de Quimica, Facultad de Ciencias, Pontificia Universidad Catolica de Valparaiso, Chile, Valparaiso, Chile)

Electrodeposition of In_2S_3 from DMSO Solution on FTO Substrates

s07-024

Paula Grez (Instituto de Quimica, Facultad de Ciencias, Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile)

Electrochemical characterization of n-type semiconductor properties of copper(I) oxide thin films

s07-025

Rodrigo Henriquez (Instituto de Quimica, Facultad de Ciencias, Pontificia Universidad Catolica de Valparaíso., Valparaiso, Chile)

Synthesis and Characterization of In_2S_3 Buffer Layer Obtained by Electrodeposition Onto CIS Absorber Substrate

s07-026

Katarzyna Hnida (Department of Physical Chemistry and Electrochemistry, Jagiellonian University, Cracow, Poland), Grzegorz Sulka, Marian Jaskula

Template-assisted Method of Synthesis InSb Nanowires for Thermoelectric Application

s07-027

Kuo-Chan Huang (Department of Electrical Engineering, National Cheng-Kung University, Tainan, Taiwan), Chien-Chih Chen, Dei-Wei Chou, Mau-Phon Houng

Investigation of Cu(In,Al)Se_2 thin films fabricated by electrodeposition technique

s07-028

Pin-Kun Hung (Institute of Microelectronics, Department of Electrical Engineering, Tainan, Taiwan), Chien-Chih Chen, Dei-Wei Chou

Suppression of Secondary Phases in $CuInSe_2$ Thin Films by Pulse Electrodeposition

s07-029

Jongwon Kim (Department of Chemistry, Chungbuk National University, Cheongju, Korea), Suhee Choi, Seo Bora, Myeounghee Hyun, Jae Joon Lee

Electrochemical Deposition of Nanostructured Au Surfaces and Their Electrochemical Applications

s07-030

Agata Krywko-Cendrowska (Department of Chemistry, University of Warsaw, Warsaw, Poland), Marcin Strawski, Bartosz Maranowski, Laurent Marot, Ernst Meyer, Marek Szklarczyk

Electrodeposition of photoconductive silicon-based films from organic solvents

s07-031

Andrzej Leniart (Department of Inorganic and Analytical Chemistry, University of Lodz, Lodz, Poland), Tadeusz Blaszczyk, Barbara Burnat

Impedance and Topographical Characterization of Pd-Ni Alloy Coatings Obtained by Electrodeposition on Polycrystalline Gold Substrate

s07-032

Sung Yul Lim (Department of Chemistry, Seoul National University, Seoul, Korea)

Optoelectrochemical Reactions on Hydrogenated Amorphous Silicon Electrodes

s07-033

Jeng-Yu Lin (Department of Chemical Engineering, Tatung University, Taipei City, Taiwan), Sheng-Yen Tai

Enhanced Stability of Electrodeposited-NiS Counter Electrodes for Dye-sensitized Solar Cells Using a Potentiodynamic Deposition Technique

s07-034

Munetsugu Machida (Department of Mechanical Systems Engineering University of the Ryukyus, Nishihara, Japan), Masatoshi Saitou

Scaling Behavior of Internal Stress in Gold Thin Films

s07-035

Bernabé Marí-Soucase (Departament de Física Aplicada-Institut de Fabricació, Universitat Politècnica de València, València, Spain), Mariola Tortosa, Miguel A. Mollar, Francisco J. Manjón

Electrodeposition of ZnO-based Spinels

s07-036

Krzysztof Mech (AGH University of Science and Technology, Laboratory of Physical Chemistry and Electrochemistry, Faculty of Non-Ferrous Metals, Cracow, Poland), Piotr Zabinski, Remigiusz Kowalik

EQCM, SEC and voltammetry study of kinetic and mechanism of hexaaminecobalt(III) electroreduction onto gold electrode

s07-037

Masahide Mutoh (Precision and Intelligence Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Takashi Nagoshi, Tso-Fu Mark Chang, Masato Sone

Effect of current density on mechanical properties of electrodeposited Cu film evaluated by micro-pillar compression test method

s07-038

Maguy Nahra (LEPMI, Saint Martin d'Hères, France), Eric Chainet

Tantalum electrodeposition in room temperature ionic liquids

s07-039

Takumo Nishimura (Department of Mechanical Systems Engineering, University of the Ryukyus, Nishihara, Japan), Masatoshi Saitou

Internal Stress in Nickel Films Electrodeposited by a Pulse Current Technique

s07-040

Emma Ortega (Universidad Politecnica de Valencia, Dpto. Ingenieria Quimica y Nuclear IEC Group, Valencia, Spain), Cristina González-Buch, Isaac Herraiz-Cardona, José García-Antón, Valentín Pérez-Herranz

Ni-Co Electrocatalytic Deposits for Hydrogen Evolution Reaction

s07-041

Tetsuya Oshiro (Department of Mechanical Systems Engineering, University of the Ryukyus, Nishihara, Japan), Masatoshi Saitou

Internal Stress Deviated from a Scaling Law Owing to an Additive Agent

s07-042

Piotr Ozga (Institute of Metallurgy and Materials Science, Polish Academy of Science, Krakow, Poland), Honorata Kazimierczak

Electrodeposition of Sn-Mn, Sn-Mn-Mo and Sn-Mn-W alloys from citrate solutions

s07-043

Adina Pavlov (Research Centre Interfaces-Tribocorrosion-Electrochemical Systems, Dunarea de Jos University of Galati, Galati, Romania), Lidia Benea, Jean-Pierre Celis

Electrosynthesis and Corrosion Behaviour of Ni/Nano-TiO_2 Composite Coating

s07-044

Nuno Pereira (Departamento de Química e Bioquímica da Faculdade de Ciências da Universidade do Porto, Porto, Portugal), C. Pereira, Fernando Silva

Electrodeposition of zinc from deep eutectic solvents in the presence of additives

s07-045

Igor Petukhov (Department of Physical Chemistry, Perm State University, Perm, Russia), Natalia Medvedeva, Vladimir Kichigin, Ilzira Subakova

On the Growth Processes of Electroless Ni–P Coatings

s07-046

Ricardo Pinto (ICEMS, Instituto Superior Técnico, Technical Universtity of Lisbon, Lisbon, Portugal), Maria Joao Carmezim, Maria de Fátima Montemor

Nucleation and Growth of Co and Mn on Stainless Steel: Electrochemical and AFM Study

s07-047

Dimitrios Tsoukleris (School of Chemical Engineering, National Technical University of Athens, Athens, Greece), Thomas Stergiopoulos, Alexandros Zoikis-Karathanasis, Antonis Karantonis, Evangelia Pavlatou, Polycarpos Falaras

Alternative, low cost cathodes for dye-sensitized solar cells using electrodeposited Ni-based coatings

s07-048

Dimitrios Tsoukleris (Laboratory of General Chemistry, School of Chemical Engineering, National Technical University of Athens, Athens, Greece), Alexandros Zoikis-Karathanasis, Pinelopi Gyftou, Athanassios Kontos, Evangelia Pavlatou, Polycarpos Falaras

Pulse electrodeposition of Ni–P matrix composite coatings reinforced by TiO_2 nanoparticles

s07-049

Marcela Vazquez (División Corrosión, INTEMA, UNMdP-CONICET, Mar del Plata, Argentina), Matías Valdés

Thin Films of $CuInSe_2$ Electrodeposited Using Constant and Pulsed Potentials

s07-050

Luciana Vieira (CEST, Competence Center for Electrochemical Surface Technology and TU-Graz, ICTM - Institute for Chemistry and Technology of Materials, Graz, Austria), Bernhard Gollas

Zinc Electrodeposition from a Choline Chloride-based Deep Eutectic Electrolyte

s07-051

Kirsi Yliniemi (Department of Chemistry, Aalto University, Espoo, Finland), David Wragg, Trystan M. Watson, H. Neil McMurray, Benjamin P. Wilson, Patrik Schmuki, David A. Worsley, Kyösti Kontturi

Nanoparticle Formation on Tin Oxide Glass by Surface-limited Redox Replacement Reaction (SLRR)

s07-052

Giovanni Zangari (CESE and Department of Material Science and Engineering, University of Virginia, Charlottesville, USA), Defu Liang

Electrodeposition of Au-Ni alloys

Nanostructures

s07-053

Agata Blacha-Grzechnik (Department of Physical Chemistry and Technology of Polymers, Faculty of Chemistry, Silesian University of Technology, Gliwice, Poland), Piotr Koscielniak, Katarzyna Krukiewicz, Jacek Szuber, Jerzy Zak

Phenothiazine-based functionalized surfaces as new materials for singlet oxygen photogeneration

s07-054

Agnieszka Brzózka (Faculty of Non-Ferrous Metals, AGH University of Science and Technology, Krakow, Poland), Grzegorz Sulka, Marian Jaskula

Fabrication of Diameter Modulated Anodic Aluminum Oxide Templates

s07-055

Evelyn Caldwell (University of Strathclyde, Glasgow, United Kingdom), Leonard Berlouis, Alastair Wark, Leung Tang

Development of Au nanorod arrays in alumina for SERRS substrates

s07-056

Christian Durante (Department of Chemical Sciences, University of Padova, Padova, Italy), Giuseppe Giallongo, Gian Andrea Rizzi, Roberto Pilot, Renato Bozio, Denis Garoli, Filippo Romanato, Gaetano Granozzi, Armando Gennaro

AAO assisted Fabrication of 2D arrays of silver nanostructures for applications as optical sensors

s07-057

Humberto Gomez (Instituto de Quimica, Facultad de Ciencias, Pontificia Universidad Catolica de Valparaiso, Chile, Valparaiso, Chile)

Electrodeposition in DMSO of ZnO nanorod arrays on very thin alumina templates

s07-058

Magdalena Jarosz (Department of Physical Chemistry & Electrochemistry, Jagiellonian University, Krakow, Poland), Elzbieta Kurowska, Joanna Kapusta-Kolodziej, Grzegorz D. Sulka, Marian Jaskula

TiO_2 Templates Modified with Ag Nanocrystals for Antibacterial Properties

s07-059

Joanna Kapusta-Kolodziej (Faculty of Physical Chemistry and Electrochemistry, Jagiellonian University, Kracow, Poland), Justyna Matyjewicz, Grzegorz D. Sulka, Marian Jaskula

Fabrication of Open-Ended TiO_2 Nanopore Arrays

s07-060

Joanna Kapusta-Kolodziej (Faculty of Physical Chemistry and Electrochemistry, Jagiellonian University, Cracow, Poland), Grzegorz D. Sulka, Marian Jaskula

Multi-sectional TiO_2 Nanopore Arrays with Bamboo-like Features Fabricated by Pulse Anodization

s07-061

Elzbieta Kurowska (Department of Physical Chemistry and Electrochemistry, Jagiellonian University, Krakow, Poland), Ewa Slomiana, Magda Jarosz, Agnieszka Brzózka, Grzegorz D. Sulka, Marian Jaskula

Ag Nanowire Sensor for Sensitive and Rapid Detection of H_2O_2 in the Presence of Various Interfering Compounds

s07-062

Oleksandr Kuzmych (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Magdalena Skompska

Defect Minimization and Morphology Optimization in TiO_2 Nanotube Thin Films, Grown on Transparent Conducting Substrate, for Dye-synthesized Solar Cell Application

s07-063

Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Feng Ming Zhao, Fei Yan, Zhi Jun Qiu

Preparation of Ti/TiO_2 film electrode and its application in electrochemical synthesis of glyoxylic acid

s07-064

Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Qian Qian Cai, Yin Hua Xu, Chun An Ma

Preparation of an activated silver electrode

s07-065

Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Wei Ming Liu, Mei Qin Shi, You Qun Chu

Synthesis of WC/RGO composite by ionic liquid and its catalytic performance in electroreduction of nitrobenzene

s07-066

Mariana P. Massafera (Institute of Chemistry, Unicamp, Campinas, Brazil), Victor C. Bassetto, José Tiago C. Barragan, Lauro Kubota

Localized Electrodeposition of Micro/Nanostructures Using the Scanning Electrochemical Microscope

s07-067

Carlos M. Muller (Dept. Química Física Universitat de Barcelona, Barcelona, Spain), Ivet Kosta, Maria Sarret, Marc Belenguer

D nanostructures of CoP. Nano vs macro properties

s07-068

Marco Musiani (IENI, CNR, Padova, Italy), Stefania Fiameni, Isaac Herraiz-Cardona, Valentín Pérez-Herranz, Lourdes Vázquez-Gómez, Enrico Verlato

Pt-Modified 3D Ni Cathodes for Water Electrolysis in Alkaline Media

s07-069

Michael Ongaro (Department of Molecular Sciences and Nanosystems, University Ca' Foscari of Venice, Venice, Italy), Arianna Gambirasi, Monica Favaro, Paolo Ugo

Electrochemical Synthesis and Characterization of Hierarchical Branched Nanostructures: ZnO Nanorods on Ensembles of Gold Nanowires

s07-070

Simonetta Palmas (Dipartimento di Ingegneria Meccanica, Chimica e Materiali, Università di Cagliari, Cagliari, Italy), Anna Da Pozzo, Michele Mascia, Ilenia Tredici, Annalisa Vacca

Synthesis and Characterization of Hierarchical Tio_2 Structures by Combined Electrochemical and Chemical Growth Techniques

s07-071

Thierry Pauporté (ENSCP, Paris, France), Oleg Lupan, Bruno Viana, Tangui Le Bahers, Ilaria Ciofini

Electrodeposited ZnO nanowire-based light emitting diodes with tunable near-UV to blue emission

s07-072

Lidija Rafailovic (CEST, Centre of Electrochemical Surface Technology, Wr. Neustadt, Austria), Christoph Gammer, Christian Rentenberger, Christoph Kleber, Hans Peter Karnthaler

Hierarchical nanodendritic NiCoFe structures suitable for catalytic applications

s07-073

Monica Santamaria (Electrochemical Material Science Laboratory, Palermo, Italy), Francesco Di Quarto, Patrizia Bocchetta

Electrochemical synthesis and physico-chemical characterization of CdSe nanotubes

s07-074

Mutsuhiro Shima (Department of Materials Science and Technology, Gifu University, Gifu, Japan), Naoki Takao

Structure and Magnetic Properties of Co/Pt Nanoparticles Synthesized by Polyol Process

s07-075

Natalia Tintaru (KU Leuven, MTM, Heverlee, Belgium), Henrikas Cesiulis, Jean-Pierre Celis

Electrochemical routes for fabrication of Co and Co-W nanostructures from citrate-borate electrolyte

s07-076

Shu-Yi Tsai (Materials Science and Engineering, National Cheng Kung University, Tainan City, Taiwan), Kuan-Zong Fung, Yu-Cheng Su, Chung-Ta Ni, Chi-Yang Liu

Effect of Different Surface Machining Processes on Improved Wettability of Titanium Substrates

s07-077

Maria Elena Vela (Lab. de Nanoscopias y Fisicoquímica de Superficies, INIFTA, CONICET, Univ. Nac. de La Plata, La Plata, Argentina), Maria Pia Quiroga Argañaraz, Susana B. Ribotta, Maria E. Folquer, Eugenia Zelaya, Jose Ramallo Lopez, Guillermo Benitez, Aldo Rubert, Liliana Gassa, Roberto C. Salvarezza

Electrodeposition of Nanostructured Ni-W coatings

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Enrico Verlato (IENI, C.N.R., Padova, Italy), Sandro Cattarin, Nicola Comisso, Luca Mattarozzi, Marco Musiani, Lourdes Vazquez-Gomez

Fabrication of Rhodium-modified Nickel Foam Cathodes for Nitrate Reduction

Surface treatment

s07-079

Mujdat Caglar (Anadolu University, Eskisehir, Turkey), Andac Arslan, Yasemin Caglar, Evrim Hur, Saliha Ilican

Preparation and Characterization of Undoped and Ni-doped ZnO Nanorod Array Films by Electrodeposition Method

s07-080

Saliha Ilican (Anadolu University, Eskisehir, Turkey), Andac Arslan, Yasemin Caglar, Evrim Hur, Mujdat Caglar

Controlled Growth of c-axis Oriented ZnO Array Films by Electrodeposition Method

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Electroactive inorganic solids

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Chi-Yang Liu (Materials Science and Engineering, National Cheng Kung University, Tainan City, Taiwan), Kuan-Zong Fung, Han-Lung Liu, Chung-Ta Ni, Shu-Yi Tsai

Effect of Cation Mixing on Conductivity and Structural Stability of $La_{0.8}Ca_{0.2}Fe_{1-X}Co_X$(x=0~0.4) MIEC in Reducing Atmosphere

s08-002

Letizia Amato (Department of Micro- and Nanotechnology, Technical University of Denmark, Kgs. Lyngby, Denmark), Arto Heiskanen, Claudia Caviglia, Stephan Keller, Anja Boisen, Jenny Emnéus

Electrochemical Evaluation of Dopamine Detection on Pyrolysed Carbon and Gold Electrodes

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Luiz Henrique Dall Antonia (Departamento de Quimica, Universidade Estadual de Londrina, Londrina, Brazil), Edson Archela, Marcelo R. da Silva, Cesar R. T. Tarley

Cobalt hydroxide film on Pt as catalyst for electro-oxidation of glycerol in alkaline medium

s08-004

Liping Guo (Faculty of Chemistry, Northeast Normal University, Changchun, China), Xiangjie Bo

Simple synthesis and application of ordered mesoporous carbon@graphene nanocomposites as a support for Pt catalyst

s08-005

Jin-Ho Kim (Icheon Branch, Korea Institute of Ceramic Engineering and Technology, Icheon-si, Korea), Kwang-Taek Hwang, Woo-Seok Cho

Synthesis of (Mg,Ni)Al_2O_4 ceramic pigment by polymerized complex method

s08-006

Rodrigo Munoz (Instituto de Química, Universidade Federal de Uberlândia, Uberlandia, Brazil), Rodrigo Montes, Eduardo Richter

Electrochemical reduction of sulphite at a ruthenium-oxide hecyanoferrate modified electrode

s08-007

Magdalena Osial (Laboratory of Electrochemistry, Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Justyna Widera, Krystyna Jackowska

Characterization of CdTe micro- and nanostructures prepared by electrodeposition and simple two-step, electrochemical-chemical technique

s08-008

Dimitrios Presvytes (Chemical Engineering and Advanced Materials, Newcastle University, Newcastle upon Tyne, United Kingdom), Asier Goñi-Urtiaga, Keith Scott

The potential of CsH_2PO_4 as a proton conducting electrolyte for water electrolysis applications

Electroactive inorganic/organic composites

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Wendel Andrade Alves (Federal University of ABC, Santo André, Brazil), Clovis Ananias da Silva, Marcio Vidotti, Pablo Alejandro Fiorito, Susana Ines Cordoba de Torresi, Roberto Manuel Torresi

Electrochromic Properties of a Metallo-supramolecular Polymer Derived from Tetra(2-pyridyl-1,4-pyrazine) Ligands Integrated in Thin Multilayer Films

s08-010

Roberta Bianchi (Centro de Ciências Naturais e Humanas, Universidade Federal do ABC, Itatiba, Brazil), Wendel Alves

Non-enzymatic Urea Detection Using Peptide-based Nanostructure Architecture Functionalized with CuO

s08-011

Soledad Bollo (University of Chile, Santiago, Chile), Roxana Rios, Diego Venegas-Yazigi, Domingo Ruiz-León

A novel hydrogen peroxide sensor based on the $ZnCoSnO_4$ spinel modified glassy carbon electrode

s08-012

Harold Braustein (Biosensors Laboratory, Molecular Microbiology and Biotechnology, The George S. Wise Faculty of Life Science, Tel Aviv University, Tel Aviv, Israel)

Novel development trends: Biosensors for environmental applications

s08-013

Luis Felipe Chazaro Ruiz (División de Ciencias Ambientales, Instituto Potosino de Investigación Científica y Tecnológica, A.C. (IPICYT), San Luis Potosi, Mexico), Areli Bejarano Jimenez, Vladimir Alonso Escobar Barrios

Control of the Electrical Properties, Water and Metal Ion Absorption Capacity of Hydrogel/Graphene Composites: Effect of Degree of Neutralization of the Hydrogel Based on Acrylic Acid

s08-014

Ali Ehsani (Department of Chemistry, K. N. Toosi University of Technology, Tehran, Iran), M.G. Mahjani, M. Jafarian

Electrosynthesis and electrochemical application of POAP nanoparticles and nanocomposite

s08-015

Balazs Endrodi (University of Szeged, Department of Physical Chemistry and Materials Science, Szeged, Hungary), Annamaria Biro, Csaba Janaky, Csaba Visy

Layer-by-layer Growth of Conducting Polymer/Magnetite Hybrid Assemblies and Their Application as Modified Electrodes

s08-016

Katarzyna Hnida (Department of Physical Chemistry and Electrochemistry, Jagiellonian University, Cracow, Poland), Grzegorz Sulka, Marian Jaskula

One-step Synthesis of Hybrid Conducting Polymer-Metal Nanowires

s08-017

Friedrich Kaasik (IMS Lab, Institute of Technology, University of Tartu, Tartu, Estonia), Janno Torop, Indrek Must, Meelis Jürgens, Enn Lust, Alvo Aabloo

Carbon-polymer-composite EAP transducers properties

s08-018

Jianyun Liu (College of Environmental Science and Engineering, Donghua University, Shanghai, China), Hailian Lin, Jianlin Xiao, Wolfgang Knoll, Shengjun Tian

Construction of Polyaniline-nanoparticle Multilayer Film with Different Dopants for Electrochemical Sensor in Neutral Solution

s08-019

Claudiu Constantin Manole (Politechnica Univeristy Bucharest, Faculty of Applied Chemistry and Materials Science, Bucharest, Romania), Cristian Pirvu, Francis Maury, Ioana Demetrescu

Hybrid organic/inorganic thin film of TiO_2/PPy grown through a single-step electrochemical process

s08-020

Audacity Maringa (Department of Chemistry, Rhodes University, Grahamstown, South Africa), Edith Antunes, Damien Quinton, Tebello Nyokong

Synthesis and Electrochemical Characterization of Nickel Nanoparticles and Their Conjugates with Phthalocyanines

s08-021

Milua Masikini (University of Western Cape, Department of Chemistry, Cape Town, South Africa), Tesfaye Waryo, Priscilla Baker

Optoelectronic and Spectroscopic Properties of Orthorhombic PdTe Colloidal Quantum Dots

s08-022

Filipe Nogueira (Departamento de Química Fundamental, Instituto de Química Universidade de São Paulo - USP, São Paulo, Brazil), Roberto Torresi

Self-assembly of Poly(o-methoxyaniline)/V2O5 nanoparticles and Electrochemical Studies in a Room-temperature Ionic Liquid

s08-023

Isabel Ornelas (CQB, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal), Ana S. Viana, Jorge Correia

Development of Conducting Polymer-based Electrocatalysts for ORR in Direct Borohydride Fuel Cells

s08-024

Miomir Pavlovic (ICTM, CEH, Belgrade, Serbia), Miroslav Pavlovic, Ljubica Vasiljevic, Vladan Cosovic, Nadezda Talijan

Electrical Conductivity of Biodegradable Composites Based on Electrodeposited Cu Powders and Lignocellulose

s08-025

Robert Sandulescu (Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania), Adela Maghear, Luminita Fritea, Cecilia Cristea, Ede Bodoki

Clay and Carbon Micro- and Nanoparticles Modified Electrodes in Pharmaceutical and Environmental Analysis

s08-026

Takuya Shinomiya (Department of Applied Chemistry, Chuo University, Tokyo, Japan), Masa-aki Haga

Electrochemical Properties of Redox-active Surface Metal-organic Framework Composed of Novel Ru Complexes with 2,6-Bis(N-pyridylbenzimidazolyl)pyridine Ligands

s08-027

Janno Torop (Institute of Technology, University of Tartu, Tartu, Estonia), Friedrich Kaasik, Sugino Takushi, Asaka Kinji, Alar Jänes, Enn Lust, Alvo Aabloo

Low-voltage Driven Actuators Based on Carbide-derived Carbon

s08-028

Winfried Vonau (Kurt-Schwabe-Institut für Mess- und Sensortechnik e.V. Meinsberg, Ziegra-Knobelsdorf, Germany), Kristina Ahlborn, Frank Gerlach, Frank Berthold

Solid-state reference electrodes for electrochemical measurement in and on concrete and brick masonry

s08-029

Xuan-Hui Zhang (School of Chemical Engineering and Materials Science, Zhejiang University of Technology, State Key Laboratory Breeding Base of Green Chemistry Synthesis Technology, Hangzhou, China), Yuan Cheng, Dan Chen, Guo-Hua Li

Preparation and Electrocatalytic Activity of Titania and Carbon Nanotubes Nanocomposite for Methanol

Electroactive polymers

s08-030

Shahzada Ahmad (Abengoa Research, Sevilla, Spain)

Electrical field assisted growth of poly(thiophenes) in ionic liquids for catalysis application

s08-031

Jadielson Antonio (Instituto de Química, Universidade de São Paulo, São Paulo, Brazil), Luiz Lira, Vinicius Gonçales, Susana Cordoba de Torresi

Polypyrrol hydro-sponges with high potential for application in controlled release systems

s08-032

Jalal Arjomandi (Department of Physical Chemistry, Faculty of Chemistry, Hamedan, Iran)

Electrosynthesis, *in situ* spectroelectrochemistry and growth rates of conducting polypyrrole and poly N-methylpyrrole on gold and indium tin oxide electrodes modified by thiolated α-cyclodextrin self-assembled monolayer's (SAMs)

s08-033

Lavinia Astratine (Materials Surface and Science Institute, University of Limerick, Limerick, Ireland), Edmond Magner, John Cassidy, Anthony Betts

Copolymerization and Characterization of Polypyrrole-Poly(3,4-ethylenedioxythiophene) Copolymer in an Air- and Water Stable Ionic Liquid

s08-034

Valentina Bonometti (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milano, Italy), Francesco Sannicolò, Serena Arnaboldi, Mirko Magni, Patrizia Romana Mussini, Wlodzimierz Kutner, Krzysztof Noworyta, Tiziana Benincori, Simona Rizzo, Roberto Cirilli, Monica Panigati

RTILs vs VOCs: The Role of the Electropolymerization Medium on the Features of Inherently Chiral Polymer Films

s08-035

George-Octavian Buica (University Politehnica of Bucharest, Bucharest, Romania), Eleonora-Mihaela Ungureanu, Jean-Claude Moutet

Poly(Malonamide-like) Films Modified Electrodes for Heavy Metal Electroanalysis

s08-036

Andreea Cernat Ilioaia (Department of Analitycal Chemistry and Instrumental Chemistry, University of Medecine and Pharmacy Iuliu Hatieganu, Cluj-Napoca, Romania), Sophie Griveau, Robert Sandulescu, Pascal Martin, Jean Christophe Lacroix, Fethi Bedioui

Electrochemical Nano Patterned Interfaces for Click Chemistry

s08-037

Ievgen Duboriz (Chemistry of Functional Materials, Institute of Bioorganic Chemistry and Petrochemistry National Academy of Science of Ukraine, Kyiv, Ukraine), Alexander Pud

Optical sensor based on electrodeposited thin films of polyaniline doped with various dopants

s08-038

Cristina Dumitriu (University Polytechnic of Bucharest, Faculty of Applied Chemistry and Materials Science, Bucharest, Romania), Rose-Marie Latonen, Zekra Mousavi, Johan Bobacka, Ioana Demetrescu

In situ UV-visible spectroscopic study on poly(3,4-ethylenedioxythiophene) electropolymerized in presence of calixarene-fullerene complex

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Elizabeth Garfias-García (Materials Department, UAM-A, Azcapotzalco, Mexico), Mario Romero-Romo, Manuel Palomar-Pardavé

Electrochemical Study of Polypyrrole onto Different Electrodes

s08-040

Sylwia Golba (University of Silesia, Institute of Materials Science, Katowice, Poland), Andrzej Swinarew, Jadwiga Gabor, Mieczyslaw Lapkowski

Insight into electrochemical properties of copolymers derived from derivatives of phenothiazine

s08-041

Oxana Gribkova (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia), Olga Omelchenko, Miroslava Trchova, Alexander Nekrasov, Victor Ivanov, Vladimir Tverskoy, Anatoly Vannikov

Template Oxidative Polymerization of Aniline in the Presence of Mixtures of Polysulfonic Acids of Various Natures and Spectroelectrochemical Characterization of the Prepared Films

s08-042

Soon-Won Jung (Convergence Components and Materials Research Laboratory, Electronics and Telecommunications Research Institute, Daejeon, Korea), Bock Soon Na, Yong Suk Yang, Jae Bon Koo, In-Kyu You

Fabrication and Characterization of Organic Transistor-based One-time Programmable Memory Array

s08-043

Christoffer Karlsson (Department of Engineering Sciences, Uppsala University, Uppsala, Sweden), Henrik Olsson, Maria Strømme, Martin Sjödin

Isoindole-4,7-dione Polymers as Candidates for Organic Lithium Ion Battery Cathodes

s08-044

Wesley Bruno Silva Machini (Department of Physics, Chemistry and Biology, Faculty of Science and Technology, University of State of Sao Paulo (UNESP), Presidente Prudente, Brazil), Cibely Silva Martin, Marcos Fernando Souza Teixeira

Electropolymerization of the Metallic Complex of Amino-Salen on the Surface of Platinum Electrode

s08-045

Inês Miranda (Faculdade de Ciências, Universidade do Porto, Porto, Portugal), Carlos Pereira, A. Fernando Silva

Characterization of AuNPs/Polyaniline Composites

s08-046

Bock Soon Na (Convergence Components and Materials Research Laboratory, Electronics and Telecommunications Research Institute, Daejeon, Korea), Soon-Won Jung, Yong Suk Yang, Jae Bon Koo, In-Kyu You

Low-voltage-operated Ferroelectric Polymer Transistor via Inkjet Printing

s08-047

Hiroshi Nishihara (Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan), Hiroaki Maeda, Junya Sendo, Shunsuke Katagiri, Ryota Sakamoto, Yoshinori Yamanoi

Coordination Programming of Electro-functional Molecular Wires on Silicon Surface

s08-048

Henrik Olsson (Uppsala University, Nanotechnology and Functional Materials, Uppsala, Sweden), Christoffer Karlsson, Leif Nyholm, Maria Strømme, Martin Sjödin

Quinone-pyrrole-polymer Materials for Organic Matter Based Energy Storage

s08-049

Manuel Palomar-Pardavé (Universidad Autónoma Metropolitana Azcapotzalco, México, Mexico), Ma. Teresa Ramirez-Silva, Silvia Corona-Avendano, Georgina Alarcon-Angeles, Mario Romero-Romo

Kinetics and Formation Mechanism of the b-cyclodextrin Conducting Polymer onto a Gold Electrode

s08-050

Jorge Pavez (Departamento de Quimica de Los Materiales, Universidad de Santiago de Chile, Santiago, Chile), Carlos P. Silva, Cristián Vera-Oyarce, Maritza Páez, Jose H Zagal

Electrosynthesis of Polyaniline nanotubes array based on anodic aluminum oxide template

s08-051

Anna-Liisa Peikolainen (Institute of Technology, University of Tartu, Tartu, Estonia), Mihkel Koel, Alvo Aabloo

Preparation of Fine Carbon Aerogel Powder

s08-052

Serban Peteu (The National Institute for Research and Development in Chemistry and Petrochemistry (INCDCPC) ICECHIM, Bucharest, Romania), Ramona Coserea, Florin Oancea

Electroactive Nano-materials and Their Potential for Precision Agriculture

s08-053

Marina Porcher (Laboratoire PCM2E-EA 6299, Tours, France), Fouad Ghamouss, Bruno Schmaltz, Pierre-Henri Aubert, François Tran-Van

Protic Ionic Liquid as Electrolyte and Electrodeposition Medium of Conducting Polymer

s08-054

Johan Saba (Ecole Normale Supérieure de Cachan, Cachan, France), Youssef Magga, Fabien Miomandre, Jinbo Bai

Continuous Electropolymerization of Conductive Polymer on Carbon Fiber grafted with Carbon Nanotubes as Reinforcement for Nanocomposites

s08-055

Mine Sen Teker (Hacettepe University, Department of Chemistry, Ankara, Turkey), Ugur Tamer, Nuran Ozcicek Pekmez

Fabrication and characterization of Poly(vinylferrocenium) perchlorate / Poly(3,4-ethylenedioxythiophene) composite–coated electrode in methylene chloride

s08-056

Piyush Sindhu Sharma (Department of Physical Chemistry of Supramolecular Complexes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Marcin Dabrowski, Krysztof Noworyta, Chandra Bikram K. C., Francis DSouza, Wlodzimierz Kutner

A Molecular Imprinting Approach Using Fullerene Polymer: Towards Selective Adenosine 5´-triphosphate (ATP) Recognition

s08-057

Kang Shi (Department of Chemistry, College of Chemistry and Chemical Engineering, Xiamen, China)

Targeted synthesis of an electroactive organic framework

s08-058

Alex Ricardo Silva Olaya (Departamento de Química, Facultad de Ciencias, Universidad Nacional de Colombia, Bogotá, Colombia), Marco Fidel Suarez-Herrera, Juan M Feliu

Oxygen Reduction Reaction (ORR) on single-crystal platinum electrodes modified with polyaniline

s08-059

Alexey Tameev (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, RAS, Moscow, Russia), Olga Omelchenko, Oxana Gribkova, Marine Tedoradze, Anatoly Vannikov

Bilayer Electrode Based on Polyaniline

s08-060

Peter S. Toth (Department of Physical Chemistry and Materials Science, University of Szeged, Szeged, Hungary), Csaba Janaky, Otto Berkesi, Tarmo Tamm, Csaba Visy

On the Unexpected Cation Exchange Behaviour, Caused by Covalent Bond Formation Between PEDOT and Cl^- Ions

s08-061

Katsuhiko Tsunashima (Wakayama National College of Technology, Wakayama, Japan), Takahiro Matsubayashi, Yasushi Ono

Electropolymerization of pyrrole in 1-ethyl-3-methyl-imidazolium bis(fluorosulfonyl)amide ionic liquid

s08-062

Paula Vale Fernandes (CIQ -L4 Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Porto, Portugal), José Campiña, Carlos Pereira, Fernando Silva

Green Electrosynthesis of Conducting Polymers from Deep Eutectic Mixtures

s08-063

Laura Valero (Electronic Department, Engineering school, Universidad Autónoma del Estado de México, Toluca, Mexico), Toribio Fernandez Otero, Francisco García, Jose Martínez

All three-in-one triple layer sensing actuators exchanging cations

s08-064

Maria Elena Vela (Lab. Nanoscopias y Fisicoquimica de Superficies, INIFTA, CONICET, Univ. Nac. de La Plata, La Plata, Argentina), Maria Belen Gonzalez, Oscar V. Quinzani, Aldo A. Rubert, Guillermo Benitez, Silvana B. Saidman

Electrosynthesis of Hollow Microtubes of Polypyrrole on Stainless Steel in the Presence of Salicylate

s08-065

Claudia Weidlich (DECHEMA-Forschungsinstitut, Frankfurt, Germany), Klaus-Michael Mangold

Electrochemically Switchable Membranes

Symposium 9: Corrosion Science and Engineering

Anodic films

s09-001

Sofia Capelo (Department of Landscape, Environment and Planning, University of Évora, Évora, Portugal), Paula Menino Homem, J. Cavalheiro, Inês Fonseca

Controlling pollution effects on metallic cultural heritage using linear sweep voltammetry

s09-002

Francesco Di Franco (Electrochemical Materials Science Laboratory, Palermo, Italy), Monica Santamaria, Francesco Di Quarto, Peter Skeldon, George E. Thompson, Carmen M. Rangel

Tuning of Solid-sate Properties of Al Mixed Oxides Grown on Sputter-deposited Al Alloys

s09-003

Yana Dzhulay (Novosibirsk State University, Novosibirsk, Russia), Vladimir Kruchinin, Boris Bokhonov, Nikolai Uvarov

Nanoporous Anodic Alumina Films: *In situ* Ellipsometric Study of Growth and Morphology Evolution

s09-004

Clara Escrivà-Cerdán (Ingeniería Electroquímica y Corrosión, Universidad Politécnica de Valencia, Valencia, Spain)

Effect of potential formation of Alloy 31 passive films in contaminated phosphoric acid

s09-005

Mu Fan (Ruhr-Universität Bochum Fakultät für Chemie und Biochemie Zentrum für Elektrochemie, Bochum, Germany), Alberto Battistel

Characterization of Instability of Titanium Dioxide Film

s09-006

Iwona Flis-Kabulska (Department of Electrochemistry, Corrosion and Applied Surface Science, Institute of Physical Chemistry PAS, Warsaw, Poland)

Transient hydrogen entry into iron from NaOH solution upon applying anodic polarisation

s09-007

Norica Godja (CEST Center of Electrochemical Surface Technology, Wiener Neustadt, Austria), Christine Löcker, Andreas Schindel, Josef Wendrinsky

Spark Anodization as a promising tool for the generation of functionalized surfaces

s09-008

Antonis Karantonis (Department of Materials Science and Engineering, School of Chemical Engineering, National Technical University of Athens, Athens, Greece), Evangelos Bourbos

Effect of anion on the electrodissolution of copper in organic acids

s09-009

Monica Santamaria (Electrochemical Material Science Laboratory, Palermo, Italy), Francesco Di Quarto, Salvatore Terracina, Hiroki Habazaki

Photoelectrochemical Characterization of Porous Anodic Films on Iron Grown in Fluoride-containing Ethylene Glycol Electrolyte

Coatings

s09-010

Habib Ashassi-Sorkhabi (Electrochemistry Research Laboratory, Center of Excellence for New Materials and Clean Chemistry, Tabriz, Iran), Moosa Eshaghi

Electrochemical Synthesis of Nanodiamonds Containing Polyaniline Coatings on Mild Steel and Its Corrosion Performance

s09-011

Denise S. Azambuja (Institute of Chemistry, Federal University of Rio Grande do Sul, Porto Alegre, Brazil), Kátia R. L. Castagno, Viviane Dalmoro

Electropolimerization of pyrrole onto aluminium alloy 1100

s09-012

Silvia Ceré (INTEMA, Universidad Nacional de Mar del Plata-CONICET, Mar del Plata, Argentina), Ianina Santana, Andres Pepe, Sergio Pellice

Hybrid organic-inorganic sol gel coatings applied on phosphatized carbon steel: The effect of coating heat treatment

s09-013

Viviane Dalmoro (Institute of Chemistry, Federal University of Rio Grande do Sul, Porto Alegre, Brazil), João Henrique Zimmoch dos Santos, Elaine Armelin, Carlos Alemán, Denise Schermann Azambuja

Characterization of TEOS/phosphonic acid films

s09-014

Hercilio G. De Melo (Polytechnic School of the University of Sao Paulo, Sao Paulo, Brazil), Milton J. Pimenta-Segundo, Victor E. Hernandez, Celia R. Tomachuk

Assessment of the Anticorrosion Properties of Electrogalvanized Steel Protected with Non-rinsed Cr(III) or Cr(VI) Passivation Layer

s09-015

Sébastien Devillers (University of Namur, FUNDP CES Laboratory, Namur, Belgium), Jean-François Lemineur, Dilimon Vijayan Sobhana, Bastien Barthélémy, Joseph Delhalle, Zineb Mekhalif

Organophosphonic Acids Nanofilms and Polyelectrolyte Multilayer Films on Nickel for Biomaterials Applications: Electrochemical and Spectroscopic Evaluation

s09-016

Ali Ehsani (Department of Chemistry, Tehran, Iran), M.G Mahjani, M Jafarian

Influence of synthesis condition and Al_2O_3 nanoparticles on corrosion protection effect of polypyrrole coating film

s09-017

Asta Griguceviciene (Center for Physical Sciences and Technology, Vilnius, Lithuania), Rima Tarozaite, Algirdas Selskis, Jurga Juodkazyte, Aleksandr Kosenko, Rimantas Ramanauskas

On the Hyper Corrosion of Electroless Ni-P Coatings

s09-018

David Holuscha (DECHEMA Froschungsinstitut, Frankfurt am Main, Germany)

Effect of cyclodextrins on the corrosion behavior of steel

s09-019

Honorata Kazimierczak (Institute of Metallurgy and Materials Science of Polish Academy of Science, Krakow, Poland), Piotr Ozga

Electrodeposition of Zn-Mo alloy layers from citrate solutions

s09-020

Shoudong Mao (Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo, China), Tingting Xie, Zhenlun Song

Corrosion behaviour of sintered NdFeB coated with Al/Al_2O_3 multilayers by magnetron sputtering

s09-021

Yunny Meas (Centro de Investigación y Desarrollo Tecnológico en Electroquímica (CIDETEQ), Querétaro, Mexico), Juan R. López, Guy Stremsdoerfer, René Antaño, Gabriel Trejo

Corrosion Resistance of Electrodeposited Nickel Obtained from a Sulphamate Bath in the Presence of a Rare Earth-based Additive

s09-022

Fatima Montemor (Instituto Superior Tecnico, Lisboa, Portugal), Maria Joao Carmezim, Teresa Silva, Joao Fernandes, Amir Zomorodain

A New Generation of Thin Hybrid Biocompatible Coatings for Corrosion Control of Bioresorsable Mg Alloys

s09-023

Manuela Petrova (Department of Materials and Chemistry, Vrije Universiteit Brussel, Brussels, Belgium), Martin Bojinov, Ilia Gadjov

An Electrochemical and Surface Analytical Study of the Electrodeposition of Molybdenum Oxide from Alkaline Electrolytes

s09-024

Jovan Popic (ICTM, Department of Electrochemistry, Belgrade, Serbia), Bore Jegdic, Vesna Miskovic-Stankovic, Jelena Bajat

The disbonding of powder polyester coating on steel and steel pretreated by zinc- and iron-phosphate coatings

s09-025

Sundar Rajalingam (CES Laboratory, Department of Chemistry, University of Namur (FUNDP), Namur, Belgium), Sébastien Devillers, Joseph Delhalle, Zineb Mekhalif

Organothiols Self-assembled Monolayers on Nickel Surfaces: A New Easy Two Step Process

s09-026

Ljiljana Zivkovic (The Vinca Institute for Nuclear Sciences, University of Belgrade, Belgrade, Serbia), Bore Jegdic, Jovan Popic, Vesna Miškovic-Stankovic, Jelena Bajat

Corrosion Stability of Polyester Coatings on AA6060 Pretreated with Different Ce-based Coatings

Corrosion

s09-027

Lidia Benea (Research Centre Interfaces Tribocorrosion and Electrochemical Systems (CC-ITES)/Dunarea de Jos University of Galati, Galati, Romania), Eliza Mardare, Jean-Pierre Celis

Influence of Surface Treatments on Corrosion Behaviour of Ti-6Al-4V Alloy in Bio-simulated Fluid Solution

s09-028

Barbara Burnat (Department of Inorganic and Analytical Chemistry, Faculty of Chemistry, University of Lodz, Lodz, Poland), Tadeusz Blaszczyk, Andrzej Leniart

Impedance Studies of the Influence of Proteins on the Electrochemical Properties of Biomedical Steel ISO 5832-9

s09-029

Alina Crina Ciubotariu (Dunarea de Jos University of Galati, Galati, Romania), Lidia Benea, Pierre Ponthiaux, François Wenger

Zn/PF Resin Composite Coatings and Their Corrosion Resistance

s09-030

Hercilio G. De Melo (Polytechnic School of the University of Sao Paulo, Sao Paulo, Brazil), Andre G. Biancardi, Rocio del P. B. Hernandez, M. Fatima Montemor

Investigating the Role of Ammonium Ions in the Corrosion Behavior of Copper in Sulfate Media

s09-031

Ramón Manuel Fernández-Domene (Ingeniería Electroquímica y Corrosión (IEC), Universidad Politécnica de Valencia, Valencia, Spain)

Effect of temperature gradients on the thermogalvanic corrosion of copper in a concentrated LiBr electrolyte

s09-032

Janusz Flis (Department of Electrochemistry, Corrosion and Applied Surface Science, Institute of Physical Chemistry PAS, Warszawa, Poland), Iwona Flis-Kabulska, Yong Sun

Corrosion and passivation in sulphate-chloride solution of AISI 316L stainless steel with nitrogen, carbon or nitrogen+carbon introduced by low temperature plasma alloying

s09-033

Arkadiusz Gajek (Department of Electrochemistry, Corrosion and Applied Surface Science, Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland), Zofia Wolarek, Tadeusz Zakroczymski

Transport of Hydrogen in Nitrided Iron Studied by Electrochemical Permeation Technique

s09-034

Aleksandra Gavrilovic (CEST, Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria), Adam H. Whitehead, Lidija Rafailovic, Christoph Kleber

The Microstructure Influence on the Corrosion Behavior of FINEMET Alloy

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Kurt Hebert (Department of Chemical & Biological Engineering, Iowa State University, Ames, USA), Omer Capraz, Pranav Shrotriya, Gery Stafford

In Situ Measurement of Corrosion-induced Tensile Stress Increases on Aluminum

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Sandrine Jakab (CEA Marcoule DEN/DRCP/SE2A/LED, Bagnols sur Ceze, France), Isabelle Solinhac

Corrosion Studies of the Oxide Dispersion Strengthened (ODS) Steels under Nuclear Fuel Dissolution Conditions

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Seong-Jong Kim (Department of Marine Engineering, Mokpo Maritime University, Mokposi, Korea), Seung-Jun Lee, Seok-Ki Jang, Kwang-yong Hyun, Min-Su Han

Cavitation characteristics of 5083-O Al alloy with amplitude variation in seawater

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Seong-Jong Kim (Division of Marine System Engineering, Mokpo Maritime University, Mokpo, Korea), Min-Su Han, Kyu-Hwan Kim, Yong-Bin Woo, Seung-Jun Lee

Characterization of various aluminum alloys in seawater

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Seong-Jong Kim (Division of Marine System Engineering, Mokpo Maritime University, Mokpo-si, Korea), Seok-Ki Jang, Min-Su Han, Min-Sung Kim, Seung-Jun Lee

Comparison of corrosion damage for Al-Mg series alloy with seawater temperature

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Silvio Koehler (Department Corrosion Protection and Testing, EXCOR, Korrosionsforschung GmbH, Dresden, Germany), Ursula Rammelt, Georg Reinhard

Investigation of the corrosion behaviour of magnesium materials in alkaline solutions

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Digby Macdonald (Department of Materials Science and Engineering, Pennsylvania State University, University Park, USA), Samin Sharifiasl, Ahmed Almarzooqi

Electrochemical Impedance Spectroscopic Examination of the Passive State on Iron

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Marcin Malik (Czestochowa University of Technology, Czestochowa, Poland), Kinga Majchrzak

The Influence of the Reinforcing Phase Content on the Corrosion Susceptibility of Mg/Mg_2Si Composites

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Philippe Refait (LaSIE, University of La Rochelle, La Rochelle, France), Maud Barbalat, Caron Didier, Lise Lanarde, Michel Meyer, Sylvain Fontaine, François Castillon, Jean Vittonato

Estimation of residual corrosion rates of steel under cathodic protection in soils via voltammetry

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Philippe Refait (LaSIE, University of La Rochelle, La Rochelle, France), Marc Jeannin, René Sabot, Hervé Antony, Loïc Paugam, Samuel Pineau

Formation and transformation of rust layers on carbon steel under cathodic protection in seawater

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Virginie Roche (LEPMI, Saint Martin d'Hères, France)

On the intrinsic coupling between CPE parameters α and Q in electrochemical impedance spectroscopy

s09-046

Lisa Rossrucker (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), Sebastian O. Klemm, Karl Mayrhofer, Jennifer Schulz, Stefan Krebs, Reinhard Wormuth

Corrosion of bulk Zn-Mg material libraries investigated with a scanning flow cell and downstream analytics

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Camelia Ungureanu (General Chemistry, University Politechnica of Bucharest, Bucharest, Romania), Daniela Ionita, Madalina Caposi, Ioana Demetrescu

Corrosion aspect of TiNi in oral cavity

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Lijing Yang (Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo, China), Yangming Zhang, Xuduo Zeng, Jianjun Jiang, Zhenlun Song

Corrosion Behaviour of Superplastic Zn-Al Alloys in Simulated Acid Rain

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Tadeusz Zakroczymski (Department of Electrochemistry, Corrosion and Applied Surface Science Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)

Specificity of the Electrochemical Permeation Method for Determination of Hydrogen Diffusivity in Metals

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Pedro de Lima-Neto (Analytical Chemistry and Physical Chemistry Department, Federal Ceara University, Fortaleza, Brazil), Amanda Cardoso, Walney Araújo, Hamilton Abreu, Luis Flávio Herculano

Corrosion Study of Fe-9Cr-1Mo Steel in CO_2-saturated Aqueous Medium

Localised corrosion

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Elizabeth Garfias-García (Materials Department, UAM-A, Azcapotzalco, Mexico), Mario Romero-Romo

SEM Study of the Chromium Carbides in a Sensitized AISI 304 SS

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Adrien Laurino (Université de Toulouse, CIRIMAT, UPS/CNRS/INPT, Toulouse, France), Emilie Bousquet, Florent Caubert, Maxime Gonkeser, Tristan Jezequel, Jean-Paul Harouard, Eric Andrieu, Christine Blanc

Effect of aging treatments on corrosion behavior of AA 6101 alloy

s09-053

Adrien Laurino (Université de Toulouse, CIRIMAT, UPS/CNRS/INPT, Toulouse, France), Eric Andrieu, Jean-Paul Harouard, Jacques Lacaze, Grégory Odemer, Christine Blanc

Influence of forming process on the corrosion behavior of AA 6101 for car manufacturing applications

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Joseline Ntienoue kamguem (Laboratoire des Matériaux et Molécules en Milieu Amazonien, ECOFOG, IESG, UAG, Cayenne, France), Alan Réguer, Christophe Roos

First steps study of 254SMO stainless steel corrosion in amazonian aqueous environment

s09-055

Ricardo M. Souto (Department of Physical Chemistry, University of La Laguna, La Laguna (Tenerife), Spain), Javier Izquierdo, Juan José Santana, Lívia Nagy, István Bitter, Géza Nagy

Fabrication of a Mg^{2+}-ion Selective Micropipette Electrode for Potentiometric Scanning Electrochemical Microscopy Monitoring of Microgalvanic Corrosion Processes

Passivity

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Omar Assowe Dabar (Université de Bourgogne, Institut Carnot de Bourgogne (ICB), Dijon, France), Olivier Politano, Vincent Vignal, Patrick Arnoux, Boubakar Diawara

Molecular modeling of nickel corrosion in aqueous solution

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Clara Escrivà-Cerdán (Ingeniería Electroquímica y Corrosión, Universidad Politécnica de Valencia, Valencia, Spain)

Effect of temperature on the passivation behaviour of Alloy 31 in phosphoric acid contaminated with fluorides

s09-058

Ramón Manuel Fernández-Domene (Ingeniería Electroquímica y Corrosión (IEC), Universidad Politécnica de Valencia, Valencia, Spain)

Semiconducting behaviour of passive films formed on UNS N08031 at different potentials in a highly concentrated LiBr solution

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Digby Macdonald (Department of Materials Science and Engineering, University Park, USA), George Engelhardt

Corrosion of Iron in Physically-constrained Locations

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Nebojsa Potkonjak (Vinca Institute of Nuclear Science, Belgrade, Serbia)

Electrochemical Oscillations During Metal Electrodissolution Induced by Current Interrupt Technique

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Yu Takabatake (Graduate School of Engineering, Hokkaido University, Saporo, Japan), Koji Fushimi, Takayuki Nakanishi, Yasuchika Hasegawa

Stability of Passive State of Iron Single Grains in Sulphuric Acid Measured by a Micro-capillary-cell

s09-062

Elsa Tcharkhtchi-Gillard (Commissariat a l'Energie Atomique et aux Energies Alternatives, Gif-sur-Yvette, France)

Passivity and passivity breakdown of 304L stainless steel in nitric acid media

Pitting, inhibitors

s09-063

Driss Ben Messaoud Left (Laboratoire Interface Matériaux, Environnement, Faculty of sciences Ain Chock, Hassan II University, Casablanca, Casablanca, Morocco), Mustapha Zertoubi, Abdellatif Irhzo, Mohammed Azzi

Henna Leaves Extract as Steel Corrosion Inhibitor in Simulated Concrete Solution

s09-064

Gaukhar Bishimdayeva (DV. Sokolskii Institute of Organic Catalysis & Electrochemistry, Almaty, Kazakhstan), Lidiya Fogel, Vadim Statsjuk

Electrochemical Formation of Metallorganic Inhibiting Compositions with Nitryltrimethylenphosphonic Acid on Brass Heat Exchangers

s09-065

Gema Cabello (Instituto de Quimica Fisica Rocasolano, CSIC, Madrid, Spain), Gary P. Funkhouser, Juanita Cassidy, Angel Cuesta

ATR-SEIRAS study of corrosion-inhibitor films on metal electrodes

s09-066

Souad El Hajjaji (Department of Chemistry, FSR, University Med V-Agdal, Rabat, Maroc)

Synergistic inhibition effect of Zn^{2+}/ aminotris (methylenephosphonic) acid system on the corrosion of carbon steel in HCl 1M

s09-067

Jeng-Yu Lin (Department of Chemical Engineering, Tatung University, Taipei City, Taiwan), Shin-Mei Lai, Feng-Inn Wu, Chi-Chao Wan

Study of Inhibitor Degradation in an Alkaline-based Post-Cu CMP Cleaning Solution

s09-068

Jesús Daniel Robles Salas (Instituto Politécnico Nacional, ESIME-ZACATENCO, México City, Mexico), Prof. María de Lourdes Elizalde Aguilar

Evaluation of the Drag Reducing Additives as a Corrosion Prevention Method for Oil Pipelines Transportation

s09-069

María Beatriz Valcarce (División Corrosión, INTEMA, UNMdP-CONICET, Mar del Plata, Argentina), Lucía Yohai, Marcela Vazquez, María Beatriz Valcarce

The Role of Chloride and Phosphate Ions on the Corrosion of Construction Steel

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Electrochemical reactors and their components

s10-001

Jana D. Abou Ziki (Concordia University, Montreal, Canada), Andrew Morrison, Ali Dolatabadi, Rolf Wuthrich

Studying Gas Bubble Dynamics on Gas Evolving Electrodes by Electrical Impedance Spectroscopy over a Wide Current Range

s10-002

Yolanda Alvarez-Gallego (Separation and Conversion Technology, Flemish Institute for Technological Research (VITO), Mol, Belgium), Xia Sheng, Xochitl Dominguez Benetton, Deepak Pant, Paolo P. Pescarmona, Ivo F. J. Vankelecom, Inge Genné, Ludo Diels

Gas diffusion electrodes for the synthesis of hydroxylamine in a NO-H_2 Fuel Cell

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Mihaela Anton (Babes Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania), Udo Schmidt, Andreas Bund, Adriana Loredana Manciulea, Petru Ilea

The Electrochemical Recovery of Zinc from Zn-MnO_2 Waste Batteries

s10-004

Henry Bergmann (Anhalt University, Koethen, Anh., Germany), Robin Toelzer, Jose M. Bisang, Alejandro N. Colli

Mass transfer studies in an electrochemical reactor with small interelectrode gaps, typical for drinking water disinfection

s10-005

Pedro H. Britto Costa (Department of Chemical Engineering, Federal University of Sao Carlos, Sao Carlos, Brazil), Edenir R. Pereira Filho, Luís A. M. Ruotolo

Copper Electrowinning using Pulsed Bed Electrode

s10-006

Pascal Buizard (LGPM, Ecole Centrale Paris, Châtenay-Malabry, France), Charles Brussieux, Philippe Viers, Mohammed Rakib, Patrick Perré, Hervé Roustan

Effect of the electrodes wettability on the current distribution

s10-007

Boulbaba Eladeb (LRGP, CNRS, Nancy, France), Caroline Bonnet, Francois Lapicque

Electrochemical extraction of oxygen using PEM electrolysis technology

s10-008

Ljiljana Gajic-Krstajic (Institute of Technical Sciences-SASA, Belgrade, Serbia)

Electrodeposited Cr-MoO_2 Composite Coatings on Titanium Substrate: Hypochlorite production

s10-009

Adriano S. O. Gomes (Department of Chemistry and Molecular Biology, Gothenburg, Sweden), Kristoffer Hedenstedt, Elisabet Ahlberg

Electrochemical Studies on Supported Chromium Oxide Nanoparticles

s10-010

Kristoffer Hedenstedt (Department of Chemistry and Molecular Biology, Gothenburg, Sweden), Elisabet Ahlberg

Fundamental Studies of Active Species on the Sodium Chlorate Cathode

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Ján Híveš (Slovak University of Technology in Bratislava, Bratislava, Slovakia), Kamil Kerekeš

Electrical Conductivity of Highly Acidic Cryolite-based Melts

s10-012

Kentaro Izumi (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Tian Zhang, Masatsugu Morimitsu

Gas Evolution Behaviors and Co (II) Oxidation on RuO_2-based Catalytic Coatings

s10-013

Rasmus Karlsson (Applied Electrochemistry, School of Chemical Science and Engineering, Royal Institute of Technology (KTH), Stockholm, Sweden), Christine Malmgren, Ann Cornell, Joakim Bäckström, Håkan Olin

Co-substituted Ruthenium-oxide Coatings with Maintained Activity for Chlorine and Hydrogen Evolution

s10-014

Marcos Lanza (IQSC, USP, São Carlos, Brazil), Rafael Reis, Robson Rocha, Juliana Steter, Artur Motheo

Generation of H_2O_2 in Electrochemical Reactor Using Gas Diffusion Electrodes (GDE)

s10-015

Jianshe Liu (School of Environmental Science and Engineering, Donghua University, Shanghai, China), Qiaoli Zheng, He Xu, Ping Yang

A Simple and Sensitive Method for the Determination of 4-n-octylphenol Based on Multi-walled Carbon Nanotubes Modified Glassy Carbon Electrode

s10-016

Emma Ortega (Universidad Politecnica de Valencia Dpto. Ingenieria Quimica y Nuclear IEC Group, Valencia, Spain), Jordi Carrillo-Abad, Montserrat García-Gabaldón, Valentín Pérez-Herranz

Evaluation of an Electrochemical Membrane Reactor for Zn Electrowinning Coming from Spent Pickling Baths

s10-017

Pavel Pershin (Institute of High Temperature Electrochemistry, Yekaterinburg, Russia)

PbO Dissolution Rate in the KCl-$PbCl_2$ Melt

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Sebastien Picart (Department of Radiochemistry and Processes, Bagnols-sur-Cèze, France), Selim Georgette, Christine Bouyer, Jerome Maurin, Laurent Venault, Stephane Grandjean, Isabelle Bisel, Jonathan Deseure, François Lapicque

Cathodic Reduction of Uranium(VI) on Platinum Electrode in Aqueous Nitrate Media

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Bianca Robotin (Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca, Romania), Adriana Ispas, Vasile Coman, Andreas Bund, Petru Ilea

A Hydrometallurgical Process for Nickel Recovery from Cathode Ray Tube Waste

s10-020

Masashi Ueda (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Tian Zhang, Masatsugu Morimitsu

A Novel Anode Using Nano RuO_2 for Zn Electrowinning: Catalytic to O_2 and Non-catalytic to Mn Oxide Deposition

s10-021

Yuji Yamada (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Tian Zhang, Masatsugu Morimitsu

Enhanced O_2 Evolution and Suppressed PbO_2 Deposition on Amorphous RuO_2-based Oxide Anodes

s10-022

Tian Zhang (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Masatsugu Morimitsu

A Novel Amorphous Oxide Anode for O_2 Evolution in Electrometallurgy

Electrochemical systems for energy production and storage

s10-023

Véronique Amstutz (Swiss Federal Institute of Technology, Lausanne, Switzerland), Kathryn Toghill, Christos Comninellis, Hubert H. Girault

A redox flow battery for hydrogen production

s10-024

Yolanda Castrillejo (Dpto Química Analítica, Faculty of Sciences, University of Valladolid, Valladolid, Spain), Prisciliano Hernández, Francisco de la Rosa, Maria del Sol Vega, Enrique Barrado

Electrochemical Extraction of Scandium from Molten Chlorides in Pyrochemical Processes

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Debabrata Chanda (Institute of Chemical Technology Prague, Prague, Czech Republic), Jaromír Hnát, Petr Mazur, Karel Bouzek

Preparation and Characterization of the Nickel Cobalt Oxides Based Catalysts for Alkaline Water Electrolysis

s10-026

Dyovani Coelho (Instituto de Química de São Carlos, Universidade de São Paulo, São Carlos, Brazil), Sergio Machado

Underpotential deposition modification of thin selenium films with bismuth

s10-027

Jaromír Hnát (Institute of Chemical Technology Prague, Prague, Czech Republic), Martin Paidar, Jan Schauer, Karel Bouzek

Preparation and Characterization of the Anode for Alkaline Water Electrolysis in Low Concentrated KOH Solutions

s10-028

Filip Karas (Department of Inorganic Technology, ICT Prague, Prague, Czech Republic), Martin Paidar, Karel Bouzek

Preparation and Characterization of Gas-diffusion Electrodes for High Temperature Water Electrolysis

s10-029

Alexandros Katsaounis (Department of Chemical Engineering, University of Patras, Patras, Greece), Evaggelos Papaioannou, Aggeliki Siokou

Effect of thermal treatment on the electrocatalytic properties of Pt-Ir binary electrodes for DAFC

s10-030

Soeun Kim (School of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea), Jin Won Kim, Jae Kwang Lee, Dong-Won Park

A study on effects depending on formation of porous Si as an anode of Si-Air Battery in alkaline electrolyte

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Jakub Mališ (Department of Inorganic Technology, Institute of Chemical Technology Prague, Prague, Czech Republic), Martin Paidar, Karel Bouzek

Influence of model organic air pollutants on the PEM type fuel cell performance

s10-032

Lucia Mascaro (Chemistry Department, Universidade Federal de Sao Carlos, Sao Carlos, Brazil), Nathalie Felicio

The electrodeposition of CdZnTe films from tartrate solution

s10-033

Martin Paidar (Department of Inorganic Technology, Institute of Chemical Technology Prague, Prague, Czech Republic), Petr Mazur, Karel Bouzek

PEM Water Electrolysis at Elevated Temperature and Pressure

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Martin Paidar (Department of Inorganic Technology, Institute of Chemical Technology Prague, Prague, Czech Republic), Petr Mazur, Jakub Polonsky, Karel Bouzek

Application of TiO_2 Supported IrO_2 Catalyst in PEM Water Electrolysis

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Jakub Polonský (Department of Inorganic Technology, Institute of Inorganic Technology Prague, Prague 6-Dejvice, Czech Republic), Petr Mazúr, Martin Paidar, Karel Bouzek

Comparison of TaC and β-SiC as Electrocatalyst Supports in PEM Water Electrolyser Anodes

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Onofrio Scialdone (Dipartimento di Ingegneria Chimica, Gestionale, Informatica, Meccanica, Università degli Studi di Palermo, Palermo, Italy), Alessandro Galia, Chiara Guarisco, Serena Grispo, Adriana Dangelo

Investigation of electrode material - Redox couple systems for reverse electrodyalisis processes

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Shao-ping Shen (Department of Chemical Engineering, National Chung Hsing University, Taichung, Taiwan), Wei-Hsiang Chen, Wei-Ping Dow, Jing-Yuan Lin, Wu-Chung Chang

Repairing copper seed layer by using electroplating process

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Karel Vazac (Department of Inorganic Technology, Institute of Chemical Technology Prague, Praque, Czech Republic), Martin Paidar, Martin Roubalík, Karel Bouzek

Application of Nafion membrane as separator in alkaline water electrolysis process

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Marisol Vega (Department of Analytical Chemistry, University of Valladolid, Valladolid, Spain), Rosario Gómez, Francisco de la Rosa, Enrique Barrado, Yolanda Castrillejo

Oxoadicity reactions of light and heavy lanthanides in the eutectic LiCl-KCl

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Jan Vít (Department of Inorganic Technology, Institute of Chemical Technology Prague, Prague, Czech Republic), Martin Paidar, Karel Bouzek

Effect of Membrane Type on PEM Water Electrolysis

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Li Xiao (Department of Chemistry, Wuhan University, Wuhan, China), Shuai Zhang, Cuixia Yang, Lin Zhuang, Juntao Lu

An Implementation of Alkaline Solid-Polymer-Electrolyte Water Electrolysis

Mathematical modeling of electrochemical systems

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Henry Bergmann (Anhalt University, Koethen, Anh., Germany), Alejandro N. Colli, Jose M. Bisang

Results from residence time distribution studies using atechnical-scale electrochemical reactor for drinking water disinfection

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Monika Drakselová (Department of Inorganic Technology, Institute of Chemical Technology, Prague, Czech Republic), Roman Kodým, Svein Sunde, Karel Bouzek

Mathematical Modelling of PEM Type Fuel Cell Degradation – Precipitation of Pt Particles in Membrane

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María de Lourdes Elizalde Aguilar (Instituto Politécnico Nacional, ESIME-ZACATENCO, México City, Mexico), Jesús Daniel Robles Salas

Uses of the Wall Shear Stress to Make a Mathematical Simulation and Predict the Corrosion Damage Due to Flow Fluid in a Pipeline

s10-045

Roman Kodým (Department of Inorganic Technology, Institute of Chemical Technology, Prague, Czech Republic), Philipp Fischer, Karel Bouzek

One-dimensional Mathematical Modelling of a High Temperature Solid Oxide Steam Electrolysis Process

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Petr Pánek (Department of Inorganic Technology, Institute of Chemical Technology, Praha, Czech Republic), Roman Kodým, Dalimil Snita, Karel Bouzek

Flow Hydrodynamics in Technical Scale Spacer Filled Channel: Mathematical Modelling and Experimental Validation

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Zhenlun Song (Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo, China), Hengxiu Yang, Shoudong Mao, Lijing Yang, Keqing Sun, Tingting Xie

The Effect of Absorbed Hydrogen on the Corrosion Behavior of Sintered NdFeB Magnet

Surface treatment

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Andrea Boldarini Couto (Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil), Leonardo Medeiros, Maurício Baldan, Neidenei Ferreira

Activity and selectivity of the nitrate electroreduction using NCD/CF and Cu-NCD/CF electrode

s10-049

Yasemin Caglar (Anadolu University, Eskisehir, Turkey), Andac Arslan, Saliha Ilican, Evrim Hur, Mujdat Caglar

Electrodeposited ZnO and ZnO:Co Nanorod Array Films: Preparation and Characterization

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Ma. Estela Calixto (Instituto de Fisica/Benemerita, Universidad Autonoma de Puebla, Puebla, Mexico), Samuel De La Luz Merino, Godofredo Garcia-Salgado, Antonio Mendez-Blas

Porous Silicon Obtained by Electrochemical Etching Using a Formaldehyde-based Electrolyte and its Evaluation for Gas Sensor Applications

s10-051

Mirela Dilea (Department of General Chemistry, University Politehnica of Bucharest, Bucharest, Romania), Daniela Ionita, Ioana Demetrescu

Electrochemical Deposition of Organic – Inorganic Coating on Ti_6Al_4Zr for Medical Application

s10-052

Nadezda Ermakova (Tyumen State University, Tymen, Russia), Ivan Nikonov

Research of Electrode Processes with Participation of Polyheteronuclear Complexes of Metals Using Spectroelectrochemical Method

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Hiroshi Kanemoto (Hitachi Laboratory, Hitachi, Ltd., Ibaraki, Japan), Haruo Akahoshi, So Oguchi, Kenta Imai, Taku Sakazume

Influence of Distorted Layer on Electrochemical Data Reproducibility of Mechanically Polished Pt Electrode

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Man Kim (KIMS, Changwon, Korea)

Fabrication of Thin Copper Multi-layered Films with Controlled Microstructure for High Performance Antenna by Electroforming

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Seong-Jong Kim (Division of Marine System Engineering, Mokpo Maritime University, Mokpo City, Korea), Min-Su Han, Min-Sung Kim, Seung-Jun Lee, Yong-Bin Woo, Jae-Cheul Park

The marine corrosion behavior of Al_2O_3-TiO_2 and CoNiAlY coating by atmospheric pressure plasma technique

s10-056

Jan Kollender (Institute for Chemical Technology of Inorganic Materials Johannes Kepler University, Linz, Austria), Andrei I. Mardare, Achim Walter Hassel

Comparison of NiZn thin film libraries prepared by electrodeposition and thermal co-evaporation

s10-057

Hiroshi Matsubara (Department of Materials Science and Technology, Nagaoka University of Technology, Nagaoka, Japan), Hideyuki Hayashizaki, Hiroshi Nishiyama, Kazunori Hodouchi

Co-deposition Mechanism of Nanodiamond with Plated Films

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Yunny Meas (CIDETEQ, Queretaro, Mexico), Alejandro Medel, Erika Bustos, Luis M. Apátiga

Surface activation of c - sp^3 in boron-doped diamond

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Mariana Prodana (General Chemistry, Bucharest, Romania), Daniela Ionita, Dionezie Bojin, Ioana Demetrescu

Electrochemical caracterization of multiwalled carbon nanotube coating on titanium alloy

s10-060

Zuzana Vlcková Živcová (J. Heyrovsky Institute of Physical Chemistry of the ASCR, Prague 8, Czech Republic), Václav Petrák, Otakar Frank, Hana Tarábková, Miloš Nesládek, Ladislav Kavan

The Influence of sp^2 Carbon Content on Electrochemical Behavior of Boron-doped Diamond Films

s10-061

Takayo Yamamoto (Kyoto Municipal Institute of Industrial Technology and Culture, Kyoto, Japan), Tomio Nagayama, Toshihiro Nakamura, Yasushi Mizutani

Effects of the Ni content on thermal expansion properties of Fe-Ni alloy electrodeposits in the Invar range

Water treatment and remediation

s10-062

Suellen Alves (Instituto de Química de São Carlos, São Carlos, Brazil), Renata Colombo, Fernanda L. Migliorini, Maurício R. Baldan, Neidenei G. Ferreira, Marcos R.V. Lanza

Degradation of Insecticide Chlorpyrifos by Electrochemical Advanced Oxidation Process

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Vanessa Antonin (LEMN, UFABC, Santo André, Brazil), Monica Assumpcao, Julio Silva, Rodrigo de Souza, Marcos Lanza, Geoffroy Malpass, Mauro Santos

Degradation of the Complex EDTA-Cu(II) by Advanced Oxidative Process

s10-064

Cynthia Araújo (Universidade Federal do Rio Grande do Norte, Natal, Brazil), Carlos Alberto Martinez-Huitle, Nedja Fernandes, Djalma Silva, Gustavo Oliveira

Electrochemical Technology as Alternative in the Degradation of Synthetic Textile Effluents Using Ti/Pt Anode

s10-065

Willyam Barros (Institute of Chemistry of São Carlos, Univeristy of São Paulo, São Carlos, Brazil), Rafael Reis, Robson Rocha, Marcos Lanza

Comparative Study of Phthalocyanines as Catalysts for Electrochemical Generation of Hydrogen Peroxide Using Gas Diffusion Electrode

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Henry Bergmann (Anhalt University, Koethen, Anh., Germany)

Parameter studies on direct drinking water electrolysis for disinfection

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Henry Bergmann (Anhalt University, Koethen, Anh., Germany), Uta Borutzky, Ulrich Junghannss

Behaviour of biofilms during electrochemical disinfection

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Henry Bergmann (Anhalt University, Koethen, Anh., Germany), Tatiana Iourtchouk, Jens Hartmann

Studies on THM formation in discontinuous drinking water electrolysis using BDD anode

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Enric Brillas (Dept. Quimica Fisica, Universitat de Barcelona, Barcelona, Spain), Abdellatif El-Ghenymy, Conchita Arias, José A. Garrido, Rosa M. Rodríguez, Francesc Centellas, Pere L. Cabot

Electro-Fenton and Solar Photoelectro-Fenton Degradation of Sulfanilamide Using a Pre-Pilot Flow Plant

s10-070

Carmen Brinzila (The "Gheorghe Asachi" Technical University of Iasi, Iasi, Romania), Maria José Pacheco, Lurdes Ciríaco, Ilie Siminiceanu, Ana Lopes

Influence of the Initial pH on the Degradation of Tetracycline at a Boron-doped Diamond Anode

s10-071

Jussara Carneiro (Universidade de São Paulo, São Carlos, Brazil), Willyam Barros, Jéssica Silva, Josimar Ribeiro, Marcos Lanza

Degradation of Amaranth Dye Using Oxide Electrodes $Ti/MO_{2(x)}TiO_{2(y)}SnO_{2(z)}$ (M = Ir or Ru)

s10-072

Florina Cuibus (Technische Universität Ilmenau Institut für Werkstofftechnik Fachgebiet Elektrochemie und Galvanotechnik, Ilmenau, Germany), Svetlozar Dimitrov Ivanov, Andreas Bund, Petru Ilea

An Electrochemical Flow Reactor for Nitrate and Nitrite Removal

s10-073

Martin Davila (Dept. Fisicoquimica, Universidad Autónoma De Puebla, Puebla, Mexico), Esmeralda Garcia, Maria Elizalde, Concepcion Ania

Electrolysis - Adsorption combination for the removal of the recalcitrant reactive dye RB5

s10-074

Szabolcs Fogarasi (Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca, Romania), Florica Imre-Lucaci, Petru Ilea

The Metals Dissolution from Waste Printed Circuit Boards Using Fe(III) as Leaching Reagent

s10-075

Sergi Garcia-Segura (Universitat de Barcelona, Barcelona, Spain), Ricardo Salazar, Enric Brillas

Removal of oxalic and oxamic acids by electro-Fenton and solar photoelectro-Fenton: Catalytic action of Fe^{2+}, Cu^{2+} and their mixtures

s10-076

Sergi Garcia-Segura (Universitat de Barcelona, Barcelona, Spain), Sergi Dosta, Francesc Centellas, Conchita Arias, Pere L. Cabot, José A. Garrido, Rosa M. Rodríguez, Enric Brillas

Photoelectrocatalytic treatment of the azo dye Acid Orange 7 using a TiO_2 photoelectrode synthesized by thermal spray

s10-077

Sergi Garcia-Segura (Universitat de Barcelona, Barcelona, Spain), Abdellatif El-Ghenymy, Francesc Centellas, Rosa M. Rodríguez, Conchita Arias, José A. Garrido, Pere L. Cabot, Enric Brillas

Degradation of the dye Brilliant Yellow 4 by electro-Fenton, photoassisted electro-Fenton and photoelectro-Fenton

s10-078

Chia-Fu Hsu (Department of Chemical Engineering, National Chung Hsing University, Taiwan), Wei-Ping Dow, Horn-Chin Lee

Formation of High Aspect Ratio Feature in Silicon Wafer Using Electrochemical Etching Method

s10-079

Alexandros Katsaounis (Department of Chemical Engineering, University of Patras, Patras, Greece), VM. Daskalaki, Z. Frontistis, I. Fulgione, L. Rizzo, D. Mantzavinos

Solar-induced photoelectrocatalytic degradation of bisphenol-A on TiO_2/ITO-film anode and BDD cathode

s10-080

Bahadir K. Körbahti (Department of Chemical Engineering, University of Mersin, Mersin, Turkey), Selin Alaca

Electrochemical Abatement and COD Reduction of Tetracycline Antibiotic Using Boron-doped Diamond Anode

s10-081

Fernanda Lanzoni Migliorini (Instituto Nacional de Pesquisas Espaciais, São José dos Campos, Brazil), Marcela Alegre, Suellen Alves, Marcos Lanza, Maurício Baldan, Neidenei Ferreira

Electrochemical oxidation of textile wastewater by using Boron-Doped Diamond Electrodes

s10-082

Xinyang Li (School of Environment, Beijing, China), Xinyang Li, Chengwen Wang, Liwei Zhang, Yi Qian, Yujue Wang

Electrochemical Treatment of Rhodamine B Simulated Wastewater Using Three-dimensional Electrode Reactor with Boron-doped Diamond Anode

s10-083

Mônica Helena Marcon Teixeira Assumpção (Centro de Ciências Naturais e Humanans, Santo André, Brazil), Rodrigo Fernando B. De Souza, Marcelo Luiz Calegaro, Robson S. Rocha, Marcos Roberto V. Lanza, Mauro C. Santos

Low-content Tungsten Oxide Nanoparticles on Carbon for Hydrogen Peroxide Electrogeneration

s10-084

Carlos Alberto Martinez-Huitle (Federal University of Rio Grande do Norte, Natal, Brazil), Jéssica H. Bezerra Rocha, Elisama Vieira dos Santos, Nedja Suely Fernandes, Djalma Ribeiro da Silva

Application of Electrochemical Oxidation as Alternative Treatment of Produced Water Generated by Brazilian Petrochemical Industry

s10-085

María José Martín de Vidales (Department of Chemical Engineering. University of Castilla-La Mancha, Ciudad Real, Spain), Adrián Esteban, Cristina Sáez, Manuel Andrés Rodrigo, Pablo Cañizares

Removal of progesterone by conductive-diamond electrochemical oxidation with ultrasounds

s10-086

Tsuyoshi Ochiai (Photocatalyst Group, Kanagawa Academy of Science and Technology, Kawasaki City, Japan), Yasuji Niitsu, Go Kobayashi, Masahiro Kurano, Izumi Serizawa, Kazuya Nakata, Taketoshi Murakami, Yuko Morito, Akira Fujishima

Development of Synergistic Environmental Purification Unit by Using of TiO_2 Modified Titanium Mesh Filter with Excimer Lamps

s10-087

Emma Ortega (Universidad Politecnica de Valencia Dpto. Ingenieria Quimica y Nuclear IEC Group, Valencia, Spain), Manuel César Martí-Calatayud, Daniella Cardoso Buzzi, Montserrat García-Gabaldón, Valentín Pérez-Herranz, Andréa Moura Bernardes, Jorge Alberto Suarez Tenório

Transport of Fe^{3+} Ions through Homogeneous and Heterogeneous Cation-exchange Membranes

s10-088

Thierry Pauporté (ENSCP-Paris, Paris, France), Jiri Rathousky, Victoire-Marie Guérin

Electrodeposited ZnO nanostructured thin films as efficient photocatalysts for pollutant degradation

s10-089

Robson Rocha (Instituto de Química de São Carlos, Universidade de São Paulo, São Carlos, Brazil), Rafael Reis, Marcos Lanza

Influence of the phthalocyanines metallics supported on Printex 6L carbon for the production of H_2O_2 *in situ*

s10-090

Romeu C. Rocha-Filho (Department of Chemistry, Universidade Federal de S. Carlos, São Carlos, Brazil), Alan H. Degaki, Gabriel F. Pereira, Nerilso Bocchi, Sonia R. Biaggio

The effect of pH and temperature on the electrochemical oxidation of the reactive blue 19 dye

s10-091

Ricardo Salazar (Departamento de Ciencias del Ambiente, Facultad de Química y Biología, Universidad de Santiago de Chile, USACh, Santiago, Chile), Felipe Sepúlveda

Degradation of textile dye acid blue 62 by electro-Fenton and photo-assisted electro-Fenton

s10-092

Ricardo Salazar (Universidad de Santiago de Chile, Santiago, Chile), Sergi Garcia-Segura, Enric Brillas

Influence of Cu^{2+} And Fe^{2+} Catalysts and Their Combinations on the Mineralization of Phthalic Acid by Electro-Fenton and Solar Photoelectro-Fenton

s10-093

Ignacio Sirés Sadornil (Universitat de Barcelona, Laboratori d'Electroquímica dels Materials i del Medi Ambient (Departament de Química Física, Facultat de Química), Barcelona, Spain), Ahmad Dirany, Nihal Oturan, Ali Ozcan, Mehmet A. Oturan

Electrochemically-mediated Generation of Hydroxyl Radicals for the Degradation of Sulfonamide Antibiotics

s10-094

Aline Maria Solano Sales (Instute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Chrystiane do Nascimento Brito, Maiara Barbosa Ferreira, Djalma Ribeiro da Silva, Nedja Suely Fernandes, Carlos Alberto Martinez-Huitle

Electrochemical Treatment of Real Textile Industrial Effluent by Strong Oxidant Species Electrogenerated on Diamond Electrode (BDD): Viability and Disadvantages

s10-095

Simone Stülp (Chemistry and Engineering department, Univates, Lajeado, Brazil), Verônica Machado, Luciano Santos, Fernando Loch, Fernando Loch, Verônica Machado

Treatment of Wastewater from the Agate Industry Using Photodegradation and Electrodialysis: Efficiency Evaluation

s10-096

Cristina Sáez (Department of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain), Manuel Andrés Rodrigo, Rubén López-Vizcaíno, Pablo Cañizares

Electrokinetic Remediation of Clayed Soils Partially Saturated

s10-097

Umran Tezcan Un (Department of Environmental Engineering, Anadolu University, Eskisehir, Turkey), Ayse Kandemir

Batch Electrocoagulation of Cheese Whey Wastewater by Iron Electrode

s10-098

Tzvety Tzvetkoff (Hydrogen Technology Centre, University of Chemical Technology and Metallurgy, Sofia, Bulgaria), Martin Bojinov, Bogdan Tzvetkov

Electrochemical Phenomena in the Conditions of Pulsed Electrolysis of Water

s10-099

Annalisa Vacca (Dipartimento di Ingegneria Meccanica, Chimica e dei Materiali Università di Cagliari, 09123 Cagliari, Italy), Michele Mascia, Simonetta Palmas, Anna Da Pozzo

Anodic Generation of Chlorinated Disinfectants during Electrochemical Treatment of Simulated Marine Waters

s10-100

Vanessa Vasconcelos (Institute of Chemistry of Sao Carlos, University of Sao Paulo, São Carlos, Brazil), Francine Ribeiro, André Beati, Marcos Lanza

Degradation of the Reactive Blue 19 dye using Boron-Doped Diamond Electrode supported on titanium

s10-101

Elisama Vieira dos Santos (Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Danyelle Medeiros de Araújo, Dayana Mirando Souza, Nedja suely Fernandes, Djalma Ribeiro da silva, Carlos Alberto Martinez-Huitle

Electrochemical Treatment of Petrochemical Wastewater (Produced Water) Using Ti/Pt and BDD Anodes

s10-102

Yusuf Yavuz (Anadolu University, Environmental Application and Research Center, Eskisehir, Turkey), Reza Shahbazi

Degradation of Reactive Black 5 Dye Solution Using Boron-doped Diamond Anode

s10-103

Yusuf Yavuz (Anadolu University, Environmental Application and Research Center, Eskisehir, Turkey), Bassam Al Aji, A. Savaþ Koparal

Treatment of Model Mixed Metal Solution Using Monopolar Iron Electrodes

Symposium 11: Intermediates and Mechanisms at a Molecular Level

Electrochemistry of organic, coordination and organometallic compounds

s11-001

Milica Stevic (Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia), Ljubisa Ignjatovic, Gordana Ciric Marjanovic, Jiri Barek, Jiri Zima

Electrochemical Oxidation of 6-Aminoquinoline on a Glassy Carbon Paste Electrode:Voltammetric and Computational Study

s11-002

Raphael Prata Bacil (Institute of Chemistry, University of São Paulo, São Paulo, Brazil), Rafael Martos Buoro, Robson Pinho da Silva, Antonio William Oliveira Lima, Luis Carlos Cides da Silva, Silvia Helena Pires Serrano

Electrochemical Mechanism of Iron - Metamizole Complexation

s11-003

Ana Paula Bettencourt (Departamento de Química, Universidade do Minho, Braga, Portugal), Jorge J. Fernandes, Magdi E.A. Zaki, M. Fernanda Proença

Electrochemical Investigation of Substituted 4,4'-biimidazole Scaffold as Anticancer Drug Candidates

s11-004

Severino Carlos Bezerra de Oliveira (Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Isabel Patricia Garrido Fernandes, Angelo da Cunha Pinto, Ana Maria Oliveira-Brett

Isatin Derivatives Redox Behaviour in Aqueous Media at a Glassy Carbon Electrode

s11-005

Severino Carlos Bezerra de Oliveira (Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Ilanna Campelo Lopes, Ana Maria Oliveira-Brett

Redox Mechanism of Temozolomide and its Metabolite

s11-006

Marina Borzenko (Faculty of Chemistry, Moscow State University, Moscow, Russia), Galina Tsirlina, Leonid Pugolovkin

Effect of Molecular Structure on Adsorption Behavior of Isopolytungstate Species at Mercury/Solution Interface

s11-007

Jana Bulickova (J. Heyrovský Institute of Physical Chemistry of ASCR, Prague 8, Czech Republic), Romana Sokolová, Beatrice Muscatello, Stefania Giannarelli

Oxidation of Indole-3-acetic Acid on Glassy Carbon Electrode

s11-008

Mihaela Ciumag (Laboratoire de Génie Chimique Université Paul Sabatier, Toulouse, France), Theodore Tzedakis

Electrochemical Behavior of Vanadyl-Octaethylporphyrin in Protic and Aprotic Media

s11-009

Victor C. Diculescu (Departamento de Química, Universidade de Coimbra, Coimbra, Portugal), Oana Popa, Laura Tugulea, Ana Maria Oliveira Brett

Electrochemical behavior of the isoflavone genistein at a glassy carbon electrode

s11-010

Victor C. Diculescu (Departamento de Química, Universidade de Coimbra, Coimbra, Portugal), Diana Golea, Laura Tugulea, Ana Maria Oliveira Brett

Redox Mechanism of the Anticancer Drug Bortezomib at a Glassy Carbon Electrode

s11-011

Sorin-Aurel Dorneanu (Department of Physical Chemistry, University "Babeş-Bolyai" Cluj-Napoca, Cluj-Napoca, Romania), Liana Maria Muresan, Ionel Catalin Popescu

Interaction between the redox centers of N-methyl-phenothiazine substituted porphyrinic compounds and their complexes with Ni(II), Cu(II) and Pd(II)

s11-012

Christian Engelbrekt (DTU Chemistry, Technical University of Denmark, Kongens Lyngby, Denmark), Jens Ulstrup, Jingdong Zhang

Dynamic Studies of Green AuNP Formation by Electrochemical and Optical Techniques

s11-013

Vitali Grinberg (Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia), Natalia Mayorova, Nikolay Kagramanov, Sergey Sterlin

Cross-dimerization of Perfluorovaleric and Perfluoro-2-propoxypropionic Acids in the Presence of Butadiene

s11-014

Irena Hoskovcová (ICT Prague, Prague, Czech Republic), Tomas Tobrman, Hana Kvapilová, Radka Metelková, Jirí Ludvík

Effect of Sterical Hindrance on Reduction of Chromium and Iron Aminocarbene Complexes

s11-015

Magdalena Hromadova (J. Heyrovsky Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Filip Teply, Martina Cizkova, Lubomir Pospisil, Viliam Kolivoska, Jan Tarabek

Dimer–Monomer Equilibria in Novel Pyridinium–based Compounds

s11-016

Ljubisa Ignjatovic (University of Belgrade, Faculty of Physical Chemistry, Belgrade, Serbia), Jiri Barek, Jiri Zima, Ivana Sredovic, Milica Stevic

Voltammetric Behavior and Determination of 1-(4'-iodophenyl)-3,3- dimethyltriazene

s11-017

Viliam Kolivoska (Department of Chemistry and Biochemistry, University of Bern, Bern, Switzerland), Pavel Moreno-Garcia, Ilya Pobelov, Alexander Rudnev, Magdalena Hromadova, Michal Valasek, Thomas Wandlowski

Redox-switching with Fc-terminated OPE-Type Adlayers: An Electrochemical and *in-situ* Scanning Tunneling Spectroscopy Study

s11-018

Stefan Kurek (Physical Chemical Group, Cracow University of Technology, Krakow, Poland), Anna Lemiecha

Uncatalysed and catalysed electroreduction of hexabromocyclododecane and its potential partial debromination products, dibromo- and monobromocyclododecane

s11-019

Kamil Kurleto (Cracow University of Technology, Faculty of Engineering and Chemical Technology, Kracow, Poland)

The Use of Cyclic Voltammetry to Determine the Antioxidant Capacity of Plant Extracts

s11-020

Hana Kvapilova (J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Stanislav Zalis, Irena Hoskovcová, Jiri Ludvik

Quantum Chemical Calculations of Redox Properties of Aminocarbene Complexes

s11-021

Alan Liška (Department of Molecular Electrochemistry, J. Heyrovský Institute of Physical Chemistry ASCR, Prague 8, Czech Republic), Adam Jaroš, Jiøí Ludvík

Electrochemical investigation of structurally modified polynitrocalix[4]arenes

s11-022

Dominique Lucas (Université de Bourgogne, Dijon, France), Véronika Zinovyeva, Sophie Fournier, Charles Devillers, Sophal Mom, Jean-Cyrille Hierso

Electrochemical Approach of the Specific Activity of Ferrocenyl Polyphosphine Ligands in Palladium(0) Catalysis

s11-023

Radka Metelkova (ICT Prague, JHIPC ASCR, Prague, Czech Republic), Irena Hoskovcová, Jiri Ludvik, Tomas Tobrman

Redox Properties of Fischer-type Carbene Complexes of Chromium with Two Central Metal Atoms

s11-024

Tomáš Mikysek (Department of Analytical Chemistry, University of Pardubice, Pardubice, Czech Republic), Jirí Ludvík

Redox Properties and Electron Delocalization of Dicyanopyrazine-based Push–Pull Chromophores

s11-025

Lubomir Pospisil (J. Heyrovsky Institute of Physical Chemistry of AS CR, Prague, Czech Republic), Sarka Lipnicka, Martin Belohradsky, Viliam Kolivoska, Magdalena Hromadova, Jan Fiedler, Irena G. Stara, Ivo Stary

Donor–Acceptor Interactions in Compounds with Multiple Tetrathiafulvalene Redox Centers

s11-026

Sarka Ramesova (J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic)

On the Difference in Oxidation Mechanism of Natural Dyes Rhamnazin and Quercetin

s11-027

Maria Teresa Ramírez-Silva (Universidad Autónoma Metropolitana Iztapalapa, México, Mexico), Dafne Guzmán-Hernández, Manuel Palomar-Pardavé, Silvia Corona-Avendano, Carlos Galán-Vidal, Alberto Rojas-Hernández, Annia Galano, Mario Romero-Romo

Spectro-Electrochemical and DFT Study of Tenoxicam Oxidation Products Formed by Electrochemical Means

s11-028

Tadaharu Ueda (Kochi University, Kochi, Japan), Daisuke Kawamoto, Miho Ohnishi, Si-Xuan Guo, John Boas, Alan Bond

Elecrochemical study on Wells-Dawson-type metal-substituted Tungstosulphates

s11-029

Eleonora-Mihaela Ungureanu (University Politehnica of Bucharest, Bucharest, Romania), Mariana-Stefania Cretu, A.C. Razus, Liviu Birzan, George-Octavian Buica

Electrochemical Studies on Azulene Compounds

Proton and electron transfers in molecular electrochemistry

s11-030

Victor C. Diculescu (Departamento de Química, Universidade de Coimbra, Coimbra, Portugal), Ilanna Campelo Lopes, Paulina Viegas Festas Santos, Ana Maria Oliveira Brett

Sorbic Acid and its Degradation Products: Electrochemical Characterization

s11-031

Thomas Doneux (Université Libre de Bruxelles, Bruxelles, Belgium), Veronika Ostatna, Emil Palecek

Learning about Peptides and Proteins from Their Catalytic Response to the Hydrogen Evolution Reaction

s11-032

Dulce Geraldo (Universidade do Minho, Braga, Portugal), Fátima Bento, Raquel Oliveira, Justine Brault

Evaluation of Antioxidant Radical Scavenging Activity by Means of Electrogenerated Hidroxyl Radicals

s11-033

Ioana-Otilia Ghinea (Faculty of Food Science and Engineering Dunarea de Jos University of Galati, Galati, Romania), Andreea Carac, Rodica Dinica

Electrochemical Behavior of Cefaclor Stability and Antimicrobial Effect

s11-034

Anna Lielpetere (Latvian Institute of Organic Synthesis, Riga, Latvia), Baiba Turovska

Synthesis and Physicochemical Characterization of New Atropisomeric 1,4-Dihydropyridine Derivatives

s11-035

Patrizia Romana Mussini (Dipartimento di Chimica Fisica ed Elettrochimica, Milano, Italy), Armando Gennaro, Abdirisak Ahmed Isse, Serena Arnaboldi

A model case of DET in ionic liquids: The reductive cleavage of carbon-halogen bondson non catalytic and catalytic electrode surfaces

s11-036

Patrizia Romana Mussini (Dipartimento di Chimica Fisica ed Elettrochimica, Milano, Italy), Armando Gennaro, Abdirisak Ahmed Isse, Francesco Sannicolò, Simona Rizzo, Ester Giussani, Alberto Bonetti

The electrocatalytic reduction of bromothiopheneson gold and silver electrodes: “Balanced” electrocatalysis?

s11-037

Viktoriya Nikitina (Lomonosov Moscow State University, Moscow, Russia), Alexander Rudnev, Thomas Wandlowski, Galina Tsirlina

Electrochemistry of Ferrocene at Gold/Alkanethiol/Ionic Liquid Interface

s11-038

Luis Nunez-Vergara (Departmento de Quimica Farmacologica y Toxicologica, Facultad de Ciencias Quimicas y Farmaceuticas, Universidad de Chile, Santiago, Chile), Viviana Pardo-Jimenez, Claudio Barrientos, Juan Squella, Patricio Navarrete-Encina

Pyridine- and dihyropyridine-fused coumarins: Reduction on Glassy Carbon Electrode in Aprotic Medium

s11-039

Ana Maria Oliveira-Brett (Departamento de Química, Universidade de Coimbra, Coimbra, Portugal)

Redox Behaviour of Verbascoside and Rosmarinic Acid

s11-040

Ana Dora Rodrigues Pontinha (Departamento de Quimica, Universidade de Coimbra, Coimbra, Portugal), Sônia Maria Alves Jorge, Ana Maria Oliveira Brett

Redox Mechanism of Omeprazole

s11-041

Piotr Romańczyk (Physical Chemistry Group, Kracow University of Technology, Krakow, Poland), Stefan Kurek, Mariusz Radon, Klemens Noga

Studies on the Mechanism of Chloroform Reduction Electrocatalysis: Hydrogen Bond Assisted Electron Transfer

s11-042

Grzegorz Rotko (Physical Chemistry Group, Cracow University of Technology, Krakow, Poland), Stefan Kurek

Competing hydrogen and proton abstraction upon aryl polybromides reduction?

s11-043

Elizabeth Santos (Institute of Theoretical Chemistry, Ulm University, Ulm, Germany), Noelia Luque

Ab-initio studies of the electronic structure of L-cysteine adsorbed on Ag(111)

s11-044

Juan Squella (Bioelectrochemistry Laboratory, Chemical & Pharmaceutical Faculty, University of Chile, Santiago, Chile), Raul Moscoso, Luis Núñez-Vergara

Studies on a new nitrocompound-encapsulated multiwalled carbon nanotube modified electrode

s11-045

Serena Li-Jun Tan (Department of Chemistry and Biological Chemistry, Nanyang Technological University, Singapore, Singapore), Richard D. Webster

Proton-coupled Electron Transfer Reactions of Riboflavin in Dimethyl Sulfoxide

s11-046

Ying Shan Tan (CBC, SPMS, Nanyang Technological University, Singapore, Singapore), Richard D. Webster

Electrochemistry of Vitamin A

Supramolecular electrochemistry and smart molecules

s11-047

Alexander Rudnev (Department of Chemistry and Biochemistry, University of Bern, Bern, Switzerland), Ulmas Zhumaev, Thomas Wandlowski

Interactions in Ferrocene-terminated Alkanethiol SAM

Synthetic electrochemistry and electrocatalysis

s11-048

Christophe Bucher (CNRS, Université Joseph Fourier Département de Chimie Moléculaire, Laboratoire de Chimie Inorganique Rédox, Grenoble, France), Mihai Buda, Adriana Iordache, Thanh-Tuan Bui, Aude Escande, Eric Saint-Aman, Jean-Claude Moutet, Jonathan Sessler, Vladimir Roznyatovskiy, Dongho Kim

Synthesizing Expanded Porphyrins eith Electrodes

s11-049

Diana Elizabeth Garcia Rodriguez (Deparatamento de Quimica, Universidad de Guanajuato, Guanajuato, Mexico), Alejandro Alatorre-Ordaz, Luis Humberto Mendoza-Huizar, Carlos Ponce de León Albarrán

Theoretical Study of Copper Clusters Deposited on Carbon Substrate for Possible Applications as Anode Catalysts in Borhydride Fuel Cells

s11-050

Nagahiro Hoshi (Department of Applied Chemistry and Biotechnology, Graduate School of Engineering, Chiba University, Chiba, Japan), Yusaku Onochi, Masashi Nakamura

Atomic Force Microscopy on the Dissolution of Tetrahedral and Cubic Pt Nanoparticles in Neutral Solution

s11-051

Angela Molina (Departamento de Quimica Fisica, Murcia, Spain), Joaquin Gonzalez, Francisco Martinez Ortiz

Electrocatalytic response of monolayer modified spherical electrodes and microelectrodes

s11-052

Davood Nematollahi (Faculty of Chemistry, Bu-Ali Sina University, Hamedan, Iran), Shadpour Mallakpour, Fahimeh Varmaghani

Electrochemical Oxidative Coupling of Hexamethylene-bis-urazole and Arylsulfinic Acides: Synthesis of Novel Bis-sulfonamide Derivatives

s11-053

Bernd Speiser (Universitaet Tübingen, Tübingen, Germany) Alexey Rybalchenko, Natalya Samoylova, Nikita Belov, Oleg Nikitin, Alexey Goryunkov, Tatiana Magdesieva

[6,6]-Closed and [6,6]-Open Difluoromethylenated [60]- and [70]fullerenes: Electrochemical and Theoretical Studies

Symposium 12: Photoelectrochemistry, Electrochromism and Elect

Activation of small molecules (models of artificial photosynthesis)

s12-001

Chin Kin Ong (Department of Chemical Engineering, Imperial College London, London, United Kingdom), Steve Dennison, Geoff Kelsall, Klaus Hellgardt

Challenges of Scaling-up Fe_2O_3 Photo-anodes on Titanium Substrates for Photoelectrochemical Water Splitting

Combined techniques for study of electrode reaction mechanisms

s12-002

Luis Ballesteros (Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile), Ricardo Schrebler, Paula Grez, Ricardo Córdova, Eduardo Muñoz, Ana Burgos

Electrochemical (EIS) and photoelectrochemical (PEIS) impedance spectroscopy of Fe/α-Fe_2O_3 nano-structured electrode system: Study of surface modification by Co(II) specie and its application in electro-oxidation reactions

s12-003

Carlos Alberto Castro Ruiz (Département de Chimie, Université de Montréal, Montreal, Canada), Dominic Rochefort, Daniel Bélanger

Spectroelectrochemical characterization of ultra-thin MnO_2 electrodes in protic ionic liquids

s12-004

David Ibáñez (Department of Chemistry, Universidad de Burgos, Burgos, Spain), Edna C. Romero, Jesus Garoz, Aranzazu Heras, Alvaro Colina

Dynamic Raman Spectroelectrochemistry: Study of single walled carbon nanotubes

s12-005

Thu-Hien Vu (Department of Chemistry and Biochemistry, University of Bern, Bern, Switzerland), Young-Chun Fu, Koji Yoshida, Ilja V Pobelov, Thomas Wandlowski

Probing double layer structure of BMPy-FEP on Au(111): Cyclic voltammetry, *in-situ* STM/STS and AFM studies

s12-006

Hamid R. Zare (Department of Chemistry, Yazd University, Yazd, Iran), Amineh Asadzadeh-Firouzabadi

Electrocatalytic oxidation of hydrazine at a diethyl (3,4-dihydroxyphenyl) (phenylamino) methylphosphonat multi-wall carbon nanotubes modified glassy carbon electrode

Electrochromism and molecular spectroelectrochemistry

s12-007

Dwight Acosta (Universidad Nacional Autónoma de Mexico, Instituto de Física, Mexico City, Mexico)

Electrochromic properties of doped WO_3 thin films produced by spray pyrolysis for different Mo and Ti contents in the starting solution

s12-008

Ann Beresford (Department of Chemistry, University of Leicester, Leicester, United Kingdom), John W. Bond, Robert Hillman

Electrochromic Enhancement of Latent Fingerprints on Gun Cartridges

s12-009

Kuo-chuan Ho (Department of Chemical Engineering, National Taiwan University, Taipei, Taiwan), Chih-wei Hu

Modification of Poly(3,4-ethylenedioxythiophene) Thin Films for Enhancing Electrochromic Performance

s12-010

Przemyslaw Ledwon (Silesian University of Technology, Faculty of Chemistry, Gliwice, Poland), Mieczyslaw Lapkowski, Krzysztof Idzik, Rainer Beckert

Electrochemical and spectroelectrochemical properties of star-shaped monomers and their polymers

s12-011

Roseli Hiromi Sato (Universidade Federal do ABC, Santo André, Brazil), Pablo Alejandro Fiorito

Synthesis and caracterization of mesoporous deposit of Prussian Blue.

s12-012

Carl-Albrecht Schiller (Zahner-elektrik, Kronach, Germany), Uli Würfel, Daniel Manka, Michael Multerer

The Electro-chromic Kinetics of Conducting Polymers - Dynamic Transmittance/Reflectance "DTR" Characterization of PEDOT: PSS-P3HT Films

s12-013

Dmytro Sydorov (Institute of Bioorganic Chemistry and Petrochemistry NAS of Ukraine, Kyiv, Ukraine), Ievgen Duboriz, Alexander Pud

Complementary RGB electrochromic cell based on poly(3-methylthiophene) and polyaniline

s12-014

De-Yin Wu (Department of Chemistry, Xiamen University, Xiamen, China), Rong Huang, Hong-Tao Yang, Li-Juan Yu, Zhong-Qun Tian

Theoretical Study on Electrochemical Surface-enhanced Raman Spectroscopy, Adsorption and Oxidation Reactions of Adenine on Silver Electrodes

Photoelectrochemistry and electrogenerated chemiluminescence

s12-015

Hortensia del Carmen Arredondo Valdez (Departamento de Ciencias Naturales y Exactas Campus Pueblito de Rocha Universidad de Guanajuato, Guanajuato, Mexico), Guadalupe Garcia Jimenez, Silvia Gutierrez Granados, Carlos Ponce de Leon

Degradation of Paracetamol by an Advanced Oxidation Process (AOPs) using modified Reticulated Vitreos Carbon (RVC) Electrodes with TiO_2 and $CuO/TiO_2/Al_2O_3$

s12-016

Michal Baudys (Department of Inorganic Technology, ICT Prague, Prague, Czech Republic), Martin Zlámal, Josef Krýsa

Photoelectrocatalytic Properties of Thermally Grown and Particulate TiO_2 Layers

s12-017

Michaela Brunclíková (ICT Prague, Prague, Czech Republic), Josef Krysa, Petra Ksirova, Stepan Kment, Zdenek Hubicka

Preparation and photoelectrochemical properties of thin sol-gel alfa-Fe_2O_3 films

s12-018

Victor Emets (Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Science, Moscow, Russia), Sergey Kozuykhin, Vitali Grinberg, Alexandr Baranchikov, Vladimir Ivanov

Photoelectrochemical cells on the TiO_2 basis prepared by high temperature hydrolysis of dihydroxodilaktatotitanium (IV) ammonium

s12-019

Vitali Grinberg (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia), Anna Goldberg, Evgenii Egorov, Mikhail Kiskin, Sergey Kozyukhin, Igor Eremenko

Redox properties of new CoII, NiII, FeII complexes with 6-ferrocenyl-2,2'-bipyridyl and other ligands

s12-020

Conor F. Hogan (Department of Chemistry, La Trobe Institute for Molecular Science, La Trobe University, Melbourne, Australia), Jacqui Delaney, Egan Doevan

Low-cost Mobile Phone-based Sensing using Electrochemiluminescence

s12-021

Amir Kaplan (Department of Chemical Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel), Leonid Soifer, Eli Korin, Armand Bettelheim

Porous Carbon Substrates Coated with Catalytic Organic Hydrogel as Water Splitting Photoanodes

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Frantisek Moulis (ICT Prague, Prague 6, Czech Republic), Josef Krysa

Photocatalytic oxidation of VOCs in air

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Reza Ojani (Department of Analytical Chemistry, Faculty of Chemistry, University of Mazandaran, Babolsar, Iran), Jahan-Bakhsh Raoof, Ebrahim Zarei

Photoelectrocatalytic Degradation Study of Phenol Based on TiO_2 Thin Film Modified Graphite Electrode

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Thierry Pauporté (ENSCP-Paris, Paris, France), Constance Magne, Thomas Moehl, Mickael Grätzel

A study by impedance spectroscopy of ZnO-based dye-sensitized photoelectrochemical solar cells

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Sarka Pausova (Department of Inorganic Technology, Institute of Chemical Technology, Prague, Prague, Czech Republic), Josef Krýsa, Jaromír Jirkovský, Vanessa Prevot, Gilles Mailhot

Photocatalytic Properties of TiO_2 Colloidal Suspensions at Various pH

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Marcelo R. da Silva (Engineering College, CTI, UNESP, Bauru, Brazil), Renata Afonso, Luiz H. DallAntonia, Luís V. A. Scalvi

Photoelectrochemical Degradation of Methylene Blue by FTO/$BiVO_4$ Electrode Photoanode

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Marcelo Rodrigues da Silva (Engineering College, CTI, UNESP, Bauru, Brazil), Adriana L. Campano, Luís V. A. Scalvi, Luiz H. DallAntonia

Heterojunction p-NiO/n-$BiVO_4$ Photoanodes Electrodes Design

s12-028

Hyunwoong Seo (Graduate School of Information Science and Electrical Engineering, Kyushu University, Fukuoka, Japan), Yuting Wang, Muneharu Sato, Giichiro Uchida, Kazunori Koga, Masaharu Shiratani, Min-Kyu Son, Hee-Je Kim

The effects of the electrolyte composition on the performance of Si quantum dot-sensitized solar cells

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Kirill Sliozberg (Ruhr-Universität Bochum Analytische Chemie, Elektroanalytik & Sensorik, Bochum, Germany), Martin Hofmann, Alfred Ludwig, Wolfgang Schuhmann

Screening of photoelectrochemical properties of Fe-W-O and Ti-W-O materials libraries using electrochemical robotics

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Mauricio Solís de la Fuente (Solar Materials, Temixco, Mexico), Marina Elizabeth Rincón González

Bi_2S_3 quantum dots-sensitized TiO_2 nanotube arrays: Effect of deposition time in photoconversion efficiency

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Olga Sushko (Kharkiv National University of Radio Electronics, Kharkiv, Ukraine), Olena Bilash, Mykola Rozhitskii

Nanophotonic Method for Polycyclic Aromatic Hydrocarbons Detection in Water

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Kazhmukan Urazov (Kazakh-British Technical University, Almaty, Kazakhstan)

The Photoelectrochemical Formation of Telluride and Selenide Thin Films

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Electric double layer

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Renata Costa (Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Porto, Portugal), Carlos M. Pereira, Fernando Silva

Electric Double Layer at the Mercury/ Binary Ionic Liquid Mixtures

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Angel Cuesta (Institute of Physical Chemistry, CSIC, Madrid, Spain), Cristina Vaz-Domínguez, María Escudero-Escribano, Francisco Prieto, Consuelo Cerrillos, Manuela Rueda

The Adsorption of Adenine on Au(111) Electrodes by Electrochemical STM

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Victor Emets (Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia), Boris Damaskin

The study of haloids ions adsorption at Ga-, (In-Ga)- and (Tl-Ga)- electrodes from the N-methylformamide solutions with constant ionic strength

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Hanbit Kang (School of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea), Sangho Chung, Jae Kwang Lee

Highly effective design of CDI electrode with carbon nanotube based materials

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Antonis Karantonis (Department of Materials Science and Engineering, School of Chemical Engineering, National Technical University of Athens, Athens, Greece), Dimitris Karaoulanis, Evangelos Bourbos

Band-stop filtering properties of electrochemical interfaces

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Erika Roxana Larios-Durán (Universidad de Guadalajara, Guadalajara, Mexico), René Antaño, Norberto Casillas, Maximiliano Bárcena-Soto

Adsorption Dynamics of Polyethylene Glycol on Platinum Electrode Studied by Modulation of the Interfacial Capacitance and EIS

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Ezequiel Leiva (Departamento de Matemática y Física, Facultad de Ciencias Químicas, INFQC Universidad Nacional de Córdoba, Cordoba, Argentina), Alexis Paz, Jimena Olmos, Martin Zoloff Michoff, Patricio Velez, Marcelo Mariscal, Christian Negre, Mariana Rojas, Cristian Gabriel Sanchez

Computer Simulation of the Behavior of Molecular Wires in the Experimental Timescale

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Martin Metzler (Institute for Electrochemistry, University of Ulm, Ulm, Germany)

Surface modification of a n-Si(111) electrode through aldehyde grafting and subsequent metallization

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Alessandro Minguzzi (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milan, Italy), Carlos M. Sanchez-Sanchez, Alessandro Gallo, Alice Gargiulo, Alberto Vertova, Sandra Rondinini, Vicente Montiel

Electrochemically induced TiO_2 "self-doping": A study by scanning electrochemical microscopy

s13-010

Francisco Prieto (Department of Physical Chemistry, University of Seville, Seville, Spain), Antonio Rodes, Julia Alvarez, Manuela Rueda

pH Effects on the Adsorption of Adenine on Gold Electrodes by *in situ* FTIR

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Zhong-Qun Tian (Department of Chemistry, State Key Laboratory of Physical Chemistry of Solid Surfaces, College of Chemistry anc Chemical Engineering, Xiamen University, Xiamen, China), Song-Yuan Ding, Bi-Ju Liu, De-Yin Wu, Bin Ren, Xin Xu

A cations-modified cluster model for DFT simulation of potential dependent Raman scattering from surface complex of silver electrodes

Electrocatalysis

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Barak Aaronson (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Changhui Chen, Stanley C.S. Lai, Patrick Unwin

Visualising single grain electro-activity on polycrystalline platinum electrodes

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Mauricio Arce (PRELINE, Facultad de Ingenieria Quimica, Universidad Nacional del Litoral, Santa Fe, Argentina), Elizabeth Santos, Wolfgang Schmickler, Paola Quaino

Interaction of OH radical with Pre-adsorbed Hydrogen on Pt (111) Surface: A DFT Study

s13-014

Michael Auinger (Department of Interface Chemistry and Surface Engineering, Max-Planck-Institut fuer Eisenforschung GmbH, Duesseldorf, Germany), Ioannis Katsounaros, Josef C. Meier, P. Ulrich Biedermann, Angel A. Topalov, Sebastian O. Klemm, Michael Rohwerder, Karl J. J. Mayrhofer

The Effective Surface pH during Reactions at the Solid/Liquid Interface

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Je Hyun Bae (Department of Chemistry, Seoul National University, Seoul, Korea), Jae Jin Bang, Taek Dong Chung

Redox Molecule Size Effect on Nanoporous Platinum: Alcohol Electrooxidation

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Stella Balomenou (Chemical Process Engineering Research Institute, Centre for Research and Technology, Hellas, Thessaloniki, Greece), Kalliopi Maria Papazisi, Dimitrios Tsiplakides

Electrochemical Promotion of Bimetallic Ir-Pt Oxide

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Elisete A. Batista (Departamento de Físico-Química, Instituto de Química, UNESP, Araraquara, Brazil), Ronan F. F. de Souza, Bruno E. Amantéa, Hebe M. Villullas

Effect of the Electronic Properties of Carbon-supported PtFe/TiO_2 Catalysts on the Activity towards Methanol Oxidation

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Olga Boytsova (J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Petr Krtil

Nanoparticulate MnO_2 Catalysts for ORR - Crystal Shape and Doping Effects

s13-019

Michael Busch (Department of Chemistry and Molecular Biology, University of Gothenburg, Gothenburg, Sweden), Patrick Steegstra, Elisabet Ahlberg, Itai Panas

Water oxidation at transition metal oxides from a binuclear perspective

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Chang-hui Chen (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Barak Aaronson, Stanley C.S. Lai, Patrick Unwin

Imaging Structure Sensitive Catalysis on Platinum at the Nanoscale

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Dancheng Chen (Laboratoire de Génie Chimique, UMR CNRS 5503, Université Paul Sabatier, Toulouse, France), Paul-Louis Fabre

Electrocatalytic Carboxylation of Chloroacetonitrile: Homogeneous and Supported in Nafion Modified Electrodes

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Sangho Chung (School of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea), HyungKuk Ju, Jae Kwang Lee

TiO_2 ultrathin layer coating on nanoparticles using a fluidized bed ALD reactor

s13-023

Jakub Drnec (ESRF, Grenoble, France), Dan Bizzotto, Francesco Carla, Roman Fiala, Aya Sode, Olivier Balmes, Blanka Detlefs, Roberto Felici

In-situ SXRD structural study of PtZn electrochemical alloying

s13-024

Patrico J. Espinoza Montero (National Autonomous University of Mexico, Centro Conjunto de Investigación en Química Sustentable UAEMéx-UNAM (CCIQS UAEMéx-UNAM), Toluca, Mexico), Bernardo A. Frontana Uribe

Kinetic Parameters of the Reduction of O_2(g) to H_2O_2 by Chronoammperometry and Rotating Disk Voltammetry on Boron-doped Diamond Electrode at Different pH

s13-025

Mariano Hernan Fonticelli (The Research Institute of Theoretical and Applied Physical Chemistry (INIFTA), La Plata, Argentina), Gastón Corthey, María Alejandra Floridia Addato, Aldo A. Rubert, Guillermo Benitez, Roberto C. Salvarezza

Alkanethiols Adsorbed on Platinum, Palladium and Bimetallic Pd/Au Surfaces

s13-026

Augusta M. Hofstead-Duffy (Department of Chemistry, Georgetown University, Washington, DC, USA), De-Jun Chen, YuYe J. Tong

Fundamental Behavior of Poly(vinylpyrrolidone) - *In situ* ATR-SEIRAS Investigation with Pt-based Electrocatalysts

s13-027

Paula Homem-de-Mello (Centro de Ciências Naturais e Humanas, Universidade Federal do ABC (UFABC), Santo André, Brazil), Janaina Souza-Garcia

A DFT study on the interaction between phthalocyanin and platinum clusters

s13-028

Nagahiro Hoshi (Department of Applied Chemistry and Biotechnology, Graduate School of Engineering, Chiba University, Chiba, Japan), Takeshi Rurigaki, Masashi Nakamura, Aya Hitotsuyanagi

Structural Effects on the Oxygen Reduction Reaction on the High Index Planes of Pt_3Ni

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James Iacobini (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Laura Hutton, Julie Macpherson

The Electrochemical and Spectroscopic Properties of Boron-doped Diamond

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Kyungmin Jo (Department of Chemistry, Pusan National University, Busa, Korea), Gorachand Dutta, Haesik Yang

Effect of Fenton's Reagent on the Electrocatalytic Activity of Gold Nanoparticles

s13-031

Zarko Jovanov (Technical University of Denmark, Department of Physics, Center for Individual Nanoparticle Functionality, Kongens Lyngby, Denmark), Ana Sofia Varela, Bjorn Wickman, Ifan Stephens, Søren Dahl, Ib Chorkendorff

The Effects of Anion Adsorption on Activity and Selectivity in Electrocatalysis of CO_2 Hydrogenation

s13-032

Sebastian Klemm (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), Arndt Karschin, Anna Schuppert, Angel A. Topalov, Ioannis Katsounaros, Karl Mayhofer

Rhodium electrode dissolution in sulfuric acid during electrochemical treatment investigated with a scanning flow cell coupled to an ICP-MS

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Youngkook Kwon (Leiden Institute of Chemistry, Leiden, Netherlands), Yuvraj Birdja, Ioannis Spanos, Paramaconi Rodriguez, Marc Koper

Highly selective electro-oxidation of glycerol to dihydroxyacetone on platinum in the presence of bismuth

s13-034

Uros Lacnjevac (Institute for Multidisciplinary Research, University of Belgrade, Belgrade, Serbia), Borka Jovic, Vladimir Jovic, Nedeljko Krstajic

Study on the mechanism of the hydrogen evolution reaction on the Ni–MoO_2 composite coating in alkaline solution

s13-035

Wen-Feng Lin (School of Chemistry and Chemical Engineering, Belfast, United Kingdom), J. M. Jin, C. Hardacre, B. Liu, R. Kavanagh, P. Hu

New Insight into the Fuel Cell Electrocatalysis at Atomic and Molecular Level: Combined Studies of *in situ* FTIR, Electron Diffraction and DFT Atomistic Modeling

s13-036

Luiz Fernando Lopes Oliveira (CEA(Atomic and Alternative Energies Commission), DRT/LITEN/DETH/ Laboratory of Components for Fuel Cells and Electrolyzers and of Modeling, Grenoble, France), Christian Jallut, Alejandro A. Franco

First-principles Study of the Adsorption of Water and Hydroxyl on the IrO_2(110) and RuO_2(110) Surfaces

s13-037

Paolo Malacrida (Department of Physics at Technical University of Denmark (DTU), Copenhagen, Denmark), Tobias Peter Johansson, Elisabeth Therese Ulrikkeholm, Patricia Hernandez-Fernandez, Ifan Stephens, Søren Dahl, Ib Chorkendorff

What factors control the stability of Pt-skin structures on Y/Pt(111) alloys for Oxygen Reduction?

s13-038

Milica Marceta Kaninski (Vinca Institute of Nuclear Sciences, Department of Physical Chemistry, Belgrade, Serbia)

On the use on non-noble electrocatalyst for PEM electrolysers

s13-039

Christoph Molls (Institute of Physical and Theoretical Chemistry, University of Bonn, Bonn, Germany), Marc Walter, Jie Xu, Helmut Baltruschat

Investigation of the Hydrogen Adsorption Process at stepped Single-crystal Platinum by EIS Measurements

s13-040

Leandro Moreira de Campos Pinto (Lab Eletrocatálise, Universidade Estadual Paulista, UNESP, Bauru, Brazil), Francielle Bortoloti, Elisabeth Santos, Wolfgang Schmickler, Antonio Carlos Angelo

Hydrogen Oxidation Reaction on Ordered Intermetallic Phases in Alkaline Media

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Gábor Mészáros (Inst. of Materials and Environmental Chemistry, Research Centre of Natural Sciences, Hung. Acad. Sci., Budapest, Hungary)

Study of the flicker noise on electro-faceted microelectrodes surfaces

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Ivana Perovic (Vinca Institute of Nuclear Sciences, Belgrade, Serbia), Gvozden Tasic, Snezana Miulovic, Dragana Zugic, Sladjana Maslovara, Vladimir Nikolic, Djordje Saponjic, Milica Marceta Kaninski

Alkaline electrolysis - Lowering the energy consumption of hydrogen production by using Ni-W-based ionic activators

s13-043

Shokoufeh Rastgarkafshgarkolaei (Sharif University of Technology, Tehran, Iran), Saeed Shahrokhian

Development of a Sensor Based on Electrodeposition of Bimetallic Au-Pt Nanoparticles on Multi-Walled Carbon Nanotubes Film for Anodic Determination of Cefotaxime

s13-044

Tobias Reier (Technische Universität Berlin, Department of Chemistry, Berlin, Germany), Benjamin Johnson, Dirk Rosenthal, Robert Schlögl, Peter Strasser

Electrocatalytic water oxidation on noble metal oxide catalysts - A combined study based on electrochemical methods and thermal desorption spectroscopy

s13-045

Peter Richardson (University of Southampton, Southampton, United Kingdom), Andrea Russell, Derek Pletcher, Kris Hyde

Robust electrocatalysts for proton exchange membrane water electrolysis

s13-046

Masayo Shibata (Department of Chemistry, Ochanomizu University, Tokyo, Japan), Chunli Song, Takara Sakurai, Naoko Hayashi, Hideo Notsu, Ichizo Yagi, Toshihiro Kondo

Electrocatalytic Activity of Pseudomorphic Pt Monolayer Electrodeposited on Single-crystal Au(111)

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Dongyoon Shin (School of Environmental Science & Engineering, Gwangju Institute of Science and Technology (GIST), Gwanju, Korea), Beomgyun Jeong, Jaekwang Lee, Sunghyun Uhm, Jaeyoung Lee

Enhancement of electrical conductivity and surface area of carbon nanofiber composites as electrocatalyst for oxygen reduction reaction

s13-048

Stamatios Souentie (Department of Chemical Engineering, University of Patras, Patras, Greece), Dimitrios Theleritis, Angeliki Siokou, Alexandros Katsaounis, Constantinos G. Vayenas

Electrochemical Promotion of the Hydrogenation of CO_2 over Ru/YSZ Catalyst Electrodes

s13-049

Janaina Souza-Garcia (Universidade Federal do ABC, Centro de Ciências Naturais e Humanas, Santo André, Brazil), Debora Carvalho-Silva, Anderson Ribeiro

Nitrate reduction on pt-modified M-phthalocyanines

s13-050

Tanta Spataru (Institute of Physical Chemistry, Ilie Murgulescu of The Romanian Academy, Bucharest, Romania), Maria Marcu, Petre Osiceanu, Cornel Munteanu, Nicolae Spataru

Effect of the Substrate on the Electrochemical Performances for Methanol Oxidation of Pt Particles

s13-051

Nicolae Spataru (Institute of Physical Chemistry, Ilie Murgulescu of The Romanian Academy, Bucharest, Romania), Petre Osiceanu, Maria Marcu, Cornel Munteanu, Tanta Spataru

Electrodeposition of Co_3O_4–Platinum Composites at Conductive Diamond Films for Electrochemical Capacitors

s13-052

Olga Swiech (Faculty of Chemistry, University of Warsaw, Warsaw, Poland)

Electrochemical Study of TEMPO Radical Covered Gold Nanoparticles Immobilized on Gold Electrode Surfaces

s13-053

Kaido Tammeveski (Institute of Chemistry, University of Tartu, Tartu, Estonia), Heiki Erikson, Ave Sarapuu, Nadezda Alexeyeva, Jose Solla-Gullón, Juan M. Feliu

Electrocatalysis of Oxygen Reduction on Palladium Nanocubes in Acid and Alkaline Solutions

s13-054

Angel A. Topalov (Interface Chemistry and Surface Engineering, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), Sebastian O. Klemm, Josef C. Meier, Ioannis Katsounaros, Karl J. J. Mayrhofer

Online Monitoring of the Dissolution of Platinum during Electrochemical Experiments by Coupled ICP-MS

s13-055

Benny Wouters (Vrije Universiteit Brussel Research Group Electrochemical and Surface Engineering, Brussels, Belgium), Xia Sheng, Andrea Boschin, Tom Breugelmans, Ivo F. J. Vankelecom, Paolo P. Pescarmona, Elisabet Ahlberg, Annick Hubin

Kinetic Study of the Nitrobenzene Reduction Reaction on Carbon Nanotube Supported Pt and Cu Nanoparticles

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Jian Yang (CASC, LIC, Leiden, Netherlands), Matteo Duca, Marc Koper

Electrocatalytic reduction of Nitrate on Pt promoted by p-block metals

s13-057

Weihua Yang (College of Materials Science and Engineering, Xiamen, China)

Enhanced catalytic activity and stability of PbO_2 electrode by co-doping with Bi^{3+} and surfactant

s13-058

Anna Zalineeva (Université de Poitiers IC2MP, UMR 7285 CNRS, Electrocatalysis Group, Poitiers, France), Stève Baranton, Christophe Coutanceau

Palladium nanoparticles with 100 and 111 surface orientations for the oxidation of small organic molecules

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Electron ion transfer and nanoplasmonics

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Dwight Acosta (Universidad Nacional Autonoma de Mexico, Instituto de Fisica, Mexico City, Mexico)

Structural evolution of zinc oxide thin films produced by electrodeposition at different solution temperatures

s13-060

Yurii Baikov (Department of Solid State Physics, Ioffe Physical Technical Institute of RAS, Saint-Petersburg, Russia), Bernard Melekh, Vladimir Klimov, Eugenii Nikulin

Isotopic Methods as Effective Tools to Study the Mass and Charge Transfer

s13-061

Myounghoon Choun (School of Environmental Science & Engineering, Gwangju, Korea), Sangho Chung, Sunghyun Uhm, Jaekwang Lee, Jaeyoung Lee

Atomic-layer-deposited TiO_2 on gas diffusion layer for performance improvement of polymer electrolyte membrane fuel cells

s13-062

Ali Ehsani (Department of Electrochemistry, Tehran, Iran), M.G. Mahjani, M. Jafarian

Physio-electrochemical properties and anomalous diffusion of counter ions in POAP nanostructure

s13-063

Thomas Miller (Department of Chemistry, University of Warwick, Coventry, United Kingdom), Neil Ebejer, Aleix Guell

Nanoscale Electrochemistry at Single-walled Carbon Nanotube Forests: Closed Ends and Sidewalls Support Fast Electron Transfer

s13-064

Fumika Nagasawa (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Hokkaido, Japan), Mai Takase, Hideki Nabika, Kei Murakoshi

In-situ polarized Surface-enhanced Raman Scattering measurements on a small number of molecules

s13-065

Mai Takase (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Hokkaido, Japan), Satoshi Yasuda, Kei Murakoshi

Observation of Localized Photochemical Reaction of an Isolated Single-walled Carbon Nanotube

s13-066

Abdul Wahab (J. Heyrovsky Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Jirí Klima, Brian Stepp, Michal Valasek, Jan Stursa, Josef Michl, Jirí Ludvik

Electrochemical Oxidation of Various Carborane Anions in Liquid SO_2 and in Fluorinated Solvents

s13-067

Julia Witt (Department of Pure and Applied Chemistry, CIS- Center of Interface Science, Faculty of Mathematics and Natural Sciences, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany), Daniel Mandler, Gunther Wittstock

Langmuir-Blodgett Monolayers of Iron Oxide Nanoparticles and Oleic Acid

Proton and electron transfers in molecular electrochemistry

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Justyna Czupryniak (University of Gdansk, Gdansk, Poland), Pawel Niedzialkowski, Dorota Zarzeczanska, Tadeusz Ossowski

Voltamperometry study of aminoanthraquinone derivatives with triaza moiety

Symposium 14: Electrochemistry at Liquid-Liquid Interfaces

Interface between two immiscible electrolyte solutions (ITIES)

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Wojciech Adamiak (Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Marcin Opallo

Effect of Spontaneous Anion Exchange on Electrochemically Driven Ion Transfer across ITIES

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Haiqiang Deng (SB ISIC/EPFL, Lausanne, Switzerland), Fernando Cortés Salazar, Pekka Peljo, Dmitry Momotenko, Kyosti Kontturi, Hubert H. Girault

Oxygen reduction by decamethylferrocene at a liquid/liquid interface: A kinetic study by scanning electrochemical microscopy

s14-003

Dawid Kaluza (Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)

Ion transfer studies in microfluidics

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Hye Jin Lee (Department of Chemistry, Kyungpook National University, Daegu, Korea), Hye Ri Jang, Sang Hyeok Lee

Amperometric Anion Selective Sensors with Micro-Water/Organic Gel Interfaces

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Marlon Maynart (Universidade Federal do ABC, Santo André, Brazil), Rafael Q. Ferreira, Hugo B. Suffredini

On the Detection of Ferrocene in Biodiesel/Water Interfaces Using a Cathodically Treated Boron-doped Electrode

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Konstantin Mikhelson (Chemical Faculty St. Petersburg State University, St. Petersburg, Russia)

Polarization Phenomena on Ion-selective Electrodes in Diluted Aqueous Solutions

s14-007

Astrid Olaya (Laboratoire d'Electrochimie Physique et Analytique, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland), Delphine Schaming, Pierre-Francois Brevet, Hubert H. Girault

Self-assembled Porphyrins at Liquid|Liquid Interfaces

s14-008

José Ribeiro (Departamento de Química e Bioquímica da Faculdade de Ciências do Porto, Porto, Portugal), Carlos M. Pereira, Fernando Silva

Investigation on the Interaction of DNA with Anticancer Drug Daunorubicin on a Polarized 1,6-Dichlorohexane/Water Interface

s14-009

Encarnación Torralba (Departamento de Quimica Fisica, Murcia, Spain), Angela Molina, Carmen Serna, Joaquín A. Ortuño

Voltammetric Characterization of the Facilitated Ion Transfer Responses Exhibiting Kinetics Effects

s14-010

Vladimir Turek (Imperial College London, London, United Kingdom), Michael Cecchini, Jack Paget, Anthony Kucernak, Alexei Kornyshev, Joshua Edel

Controlled Spacing Between Plasmonic Nanoparticles at Liquid/Liquid Interfaces

s14-011

Elena Vladimirova (Department of Analytical Chemistry, D. Mendeleyev University of Chemical Technology of Russia, Moscow, Russia), Sergei Zolotov, Anna Dunaeva, Elena Shipulo, Oleg Petrukhin

Using Calixarenes as neutral carriers in the method of voltammetry at the two immiscible electrolyte solutions for ammonium ion determination

Interfacial structure and charge transfer kinetics

s14-012

Dorota Gugala-Fekner (Department of Analytical Chemistry and Instrumental Analysis, Faculty of Chemistry, M. Curie-Sklodowska University, Lublin, Poland), Jolanta Nieszporek, Dorota Sienko, Jadwiga Saba

Adsorption of Cytidine at the Electrode-acetic Buffer Interface

s14-013

Antonio Angel Moya (Departamento de Física Universidad de Jaén, Jaén, Spain), José Alberto Moleón, José Horno

Application of the Network Simulation Method to Study Ion Transport Processes Through Ion-exchange Membranes

s14-014

Jolanta Nieszporek (Department of Analytical Chemistry and Instrumental Analysis, Lublin, Poland), Dorota Gugala-Fekner, Dorota Sienko, Jadwiga Saba

Kinetics of Zn^{2+} ions electroreduction at electrode $NaClO_4$, H_2O and octyltrimethylammonium bromide interface

s14-015

Dorota Sienko (Department of Analytical Chemistry and Instrumental Analysis, Lublin, Poland), Dorota Gugala-Fekner, Jolanta Nieszporek

The influence of polyethyleneglycol on the electrosorption of 1-decanesulfonic acid anion in the dependence of the base electrolyte concentration

Molecular electrocatalysis

s14-016

Harold Braustein (Biosensors Laboratory, Molecular Microbiology and Biotechnology, The George S. Wise Faculty of Life Science, Tel Aviv University, Tel Aviv, Israel)

Food Security - Electroanalytical Nano- Immuno-biosensors and their potential for food pathogen and toxin detection

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Peiyu Ge (Chemistry and Chemical Engineering, Lausanne, Switzerland), Hubert H. Girault

Biphasic water splitting by osmocene

s14-018

Pekka Peljo (Department of Chemistry, Aalto University, Espoo, Finland), Lasse Murtomäki, Tanja Kallio, Hubert H. Girault, Kari Laasonen, Kyösti Kontturi

Cofacial porphyrins as bio-inspired oxygen reduction catalysts at the liquid-liquid interface

s14-019

Zdenek Samec (J. Heyrovský Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Antonin Trojanek, Jan Langmaier, Stanislav Zalis

Mechanistic Model of the Oxygen Reduction Catalyzed by a Metal-free Porphyrin in One- and Two-Phase Liquid Systems

Room temperature ionic liquids

s14-020

Jan Langmaier (J. Heyrovský Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Zdenek Samec

Electron transfer across the interface between water and a hydrophobic redox-active ionic liquid: The thermodynamic aspects

s14-021

Chun An Ma (Zhejiang University of Technology, Hangzhou, China), Yin Xu Zhang, Xin Biao Mao

Electro-reduction of nitrobenzene in ionic liquid $BPyBF_4$

s14-022

Stephanie Vanderaspoilden (Chimie Analytique et Chimie des Interfaces, Faculté des Sciences, Université Libre de Bruxelles, Bruxelles, Belgium), François Verhaegen, Thomas Doneux, Claudine Buess-Herman

Electrochemical Interface in RTILs: Study of 1-Butyl-3-Methylimidazolium-based Ionic Liquids at a Mercury Electrode

Symposium 15: General Session

s15-001

Silvia Ceré (INTEMA-CONICET-UNMdP, Mar del Plata, Argentina), Sheila Omar, Josefina Ballarre

Electrochemical characterization of sol-gel coatings containing Sr-silicate glass particles applied onto surgical grade stainless steel

s15-002

Gustavo Rodrigues Oliveira (Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Cynthia Kerzia Costa de Araújo, Elisama Vieira dos Santos, Cleonilson Mafra Barbosa, Nedja Suely Fernandes, Carlos Alberto Martinez-Huitle

Theoretical Models of Advanced Mechanisms of Electrochemical Oxidation

s15-003

Abd-El-Aziz Abd-El-Latif (Department of Electrochemistry, Institute of Physical and Theoretical Chemistry, Bonn, Germany), Jie Xu, Nicky Bogolowski

New DEMS Cell Applicable to Different Electrode Sizes

s15-004

William Reis Araujo (Instituto de Química, Universidade de São Paulo, São Paulo, Brazil), Maiara Oliveira Salles, Thiago Paixão

Electrochemical Determination of Creatinine by Differential Pulse Voltammetry Using Jaffé's Reaction

s15-005

Elena Baranova (Department of Chemical and Biological Engineering, University of Ottawa, Ottawa, Canada), Oleksandr Kuznetsov

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The International Society of Electrochemistry

The International Society of Electrochemistry (ISE) was founded in 1949 by leading European and American electrochemists to serve the growing needs of electrochemistry. At that time only a handful of scientists were members of the society – known as CITCE (Comité International de Thermodynamique et Cinétique Electrochimiques). Since then ISE has evolved and comprises now more than 3100 individual members, from 70 countries, and is organized in 41 Regional Sections. Both industrialised and developing countries from all five continents are represented. ISE is, therefore, a truly world-wide organisation. ISE is a non-profit-making organisation with its seat in Lausanne, Switzerland.

The International Society of Electrochemistry (ISE) is devoted to the advancement of electrochemical science and technology through the promotion of international contacts and the dissemination of scientific knowledge. For this ISE organises Annual and Topical Meetings which are held in different countries each year and which cover a wide range of current topics in fundamental and applied electrochemistry. The activities of ISE include the sponsoring of regional meetings, and of special meetings of limited participation devoted to particular subjects. A scientific journal, Electrochimica Acta, is edited by ISE and supplied to its members at a special rate. Individuals, non-profit organisations, industrial companies and learned societies may become members of ISE. The administration of ISE is done by an Executive Committee, periodically elected by all members. The Regional Representatives together with the Division Officers form the ISE Council which advises the Executive Committee. The scientific activities of ISE are grouped into Scientific Divisions. They are organised and co-ordinated by the Committee of Division Officers headed by the President Elect. Upon joining ISE each member indicates his/her divisional interests.

The history of the International Society of Electrochemistry (ISE) is described in a series of articles published in Volume 45 of Electrochimica Acta and available on the web site of the Society (http://www.ise-online.org/geninfo/history.php).

Why you should become an ISE member

There are many reasons for joining the International Society of Electrochemistry. Individual ISE members can obtain:

- reduced subscription rates for the official journal of the Society (Electrochimica Acta) and several other important journals: Journal of Electroanalytical Chemistry, Electrochemistry Communications, Bioelectrochemistry, Corrosion Science, Journal of Power Sources, Journal of Applied Electrochemistry, Electroanalysis and Journal of Solid State Electrochemistry.
- reduced registration fees at ISE Meetings
- access to the "members restricted area" of the ISE website
- access to the full membership directory which contains the addresses of all the members of ISE
- support from the Millennium Fund and the Presidential Fund
- updated information on ISE activities

Young members can apply for the Electrochimica Acta Travel Awards for Young Electrochemists.

ISE members participate fully in the Society's activities which are aimed at advancing electrochemical science and technology, disseminating scientific and technological knowledge, promoting international cooperation in electrochemistry, and maintaining a high professional standard among its members.

How to become an ISE member

Becoming an ISE member is simple: you will find a Membership Application Form on the Society web site (at the address: http://members.ise-online.org/members/new_members.php), which you can fill in and submit online. In the application form you will have to select up to three Divisions and indicate two sponsoring ISE members. Should it be difficult for you finding these sponsors, please write to the Executive Secretary of the Society Dr. M. Musiani, e-mail: m.musiani@ieni.cnr.it. The individual membership fee for the calendar year 2012 is 40 Euro (10 Euro for age below 30). Once your application is accepted, the ISE Office will contact you for the payment of the membership dues.

ISE Organization

Executive Committee

The Executive Committee is entrusted with the management of the Society.

ISE Office

The ISE Office performs all administrative tasks related to the operation of the Society. It is located in Switzerland, and managed by an Executive Secretary.
The ISE Office serves as the primary contact for members and non-members.

Division Officers

The scientific activities of ISE are grouped into seven Scientific Divisions and a New Topics Committee. The divisions are headed by a Chairperson assisted by a Past Chair, a Chair Elect and two Vice Chairs. Their role is to promote and represent the scientific interests of the division and its members, for example through contributing to the organization of Annual, Topical and other Society meetings.

Regional Representatives

In each country or group of countries having fifteen members or more, a national or regional section of ISE may be formed. Each section has a Regional Representative.

Council

The ISE Council is an Advisory Body. The voting members of the Council consist of three Officers from each Division and all the Regional Representatives. All persons constituing the Council are elected by the members of the Society.

Scientific Meetings Committee

The Scientific Meetings Committee plans and oversees the organization and sponsorship of scientific meetings within the broad field of electrochemistry.

Fellows Nominating Committee

The Fellows Nominating Committee is a standing committee which proposes names to the Executive Committee for the title of ISE Fellow. It is also responsible for identifying candidates for honorary membership.

Publications Committee

The Publication Committee, a standing committee of ISE, acts as an advisory board to the Executive Committee on publication matters.

ISE Executive Committee

President

M. Orazem, Gainesville, FL (2011-2012)
Representation of ISE. Chairperson of Executive Committee, Council and General Assembly.

President Elect

H. Kim, Seoul, Korea (2011-2012)
Chairperson of Committee of Division Officers. Coordination of scientific program of future Annual Meetings, supervision of Division Officers' activities.

Immediate Past President

A.R. Hillman, Leicester, UK (2011-2012)
Chairperson of Executive Committee in the absence of the President.

Vice Presidents

Ch. Amatore, Paris, France (2011-2013)
Responsible for relations with other Societies

S. Cordoba de Torresi, Sao Paulo, Brazil (2012-2014)
Responsible for Educational Activities in ISE

M. Koper, Leiden, Netherlands (2012-2014)
Responsible for Corporate and Corporate Sustaining Members

H. Nishihara, Tokyo, Japan (2011-2013)
Responsible for Regional Sections

Secretary General

M. Rueda (2012-2014)
General tasks
Ensuring continuity and efficiency of scientific policy. Coordination of tasks of Vice Presidents. Identification of new developments in electrochemistry and possible new scientific and nonscientific activities. Scientific matters not handled by the President or President Elect.
Tasks in collaboration with ISE Office
Ensuring that constitution, bylaws, guidelines, schedules etc. are observed. Preparation of Annual Reports. Collection of information for newsletters and coordination of actions.
ISE Meetings
Coordination of Meetings (location, time, topics). Representative of Executive Committee and advisor to Local Organising Committees for nonscientific matters (location, facilities, control of financial planning, schedule, publicity).

Treasurer

B. Tribollet, Paris, France (2011-2013)
Responsible for the administration and the management of the assets and property of the Society, preparation of budgets and financial reports, financial planning, investment policy, supervision of financial matters of Annual and Topical ISE Meetings.

Executive Secretary

M. Musiani, Padova, Italy (2009-2013)
Responsible for maintaining the ISE calendar, assisting with organizing the business and financial arrangements for Annual and Topical Meetings, organising committee appointments, assisting the Secretary General with Society elections, recruiting new members, and co-ordinating Executive Committee meetings. Drafts ISE documents, acts as web page editor, maintains ISE archives and records, and serves as the contact person for members (particularly at ISE meetings).

Scientific Divisions of ISE

Division 1 – ANALYTICAL ELECTROCHEMISTRY

Experimental and theoretical aspects of the analytical process in which electrochemistry has a role, including sample collection / processing, separation, and species identification and quantitation.
Chair: A. Bond, Past Chair: S. Daniele, Chair Elect: A. Downard, Vice-Chairs: F. Bedioui and C.-S. Toh

Division 2 – BIOELECTROCHEMISTRY

Aspects of electrochemistry and electroanalysis characterizing biological processes at the molecular level and relevant to the mechanisms of biological regulation of cells.
Chair: A. Kuhn, Past Chair: L. Gorton, Chair Elect: W. Shin, Vice-Chairs: E. Ferapontova and E. Katz

Division 3 – ELECTROCHEMICAL ENERGY CONVERSION AND STORAGE

Experimental and theoretical aspects of electrochemistry in which the goal is the interconversion of energy between different forms or the storage of energy, including the processes themselves and materials used for these purposes.
Chair: E. Frackowiak, Past Chair: M. Winter, Chair Elect: D. Jones, Vice-Chairs: R. Kostecki and S. Passerini

Division 4 – ELECTROCHEMICAL MATERIALS SCIENCE

Aspects of materials science in which electrochemistry is part of the synthesis, processing, surface treatment, corrosion, characterization or modeling of new or existing materials, or in which electrochemistry is the user of such materials.
Chair: P. Schmuki, Past Chair: T. Moffat, Chair Elect: M. Ryan, Vice-Chairs: S. Brankovic and M. Vorotyntsev

Division 5 – ELECTROCHEMICAL PROCESS ENGINEERING AND TECHNOLOGY

Experimental and theoretical aspects and applications of electrochemistry in which engineering issues play a significant role, including scale-up and reactor design.
Chair: T. Homma, Past Chair: F. Walsh, Chair Elect: F. Lapicque, Vice-Chairs: K. Bouzek and G. Zangari

Division 6 – MOLECULAR ELECTROCHEMISTRY

Structural and mechanistic aspects of electrode processes of inorganic, metallorganic and organic substances; synthetic applications.
Chair: J. Ludvik, Past Chair: M.Opallo, Chair Elect: M. Goulart, Vice-Chairs: J. Wadhawan and M. Watanabe

Division 7 – PHYSICAL ELECTROCHEMISTRY

Experimental, theoretical and computational aspects of electrochemistry, alone or in conjunction with other methods, relevant to interfaces and conductive media; this shall include physicochemical nature, structure and dynamics from the molecular to the macroscopic level.
Chair: E. Savinova, Past Chair: E. Leiva, Chair Elect: M. Eikerling, Vice-Chairs: H. Varela and L. Zhuang

New Topics Committee

The New Topics Committee identifies interesting and relevant scientific and technological subjects not covered by the ISE Divisions. It has tasks similar to those of a Division, except that it may have several and changing technical priorities.
Chair: H. Abruña, Past Chair: T. Matsue, Chair-Elect: T. Jacob

Regional Representatives

Argentina:	A.E. Bolzan	2012-2014	1st term
Australia	J. Gooding	2011-2013	1st term
Austria:	W. Kautek	2010-2012	1st term
Belgium:	C. Buess-Herman	2010-2012	1st term
Brazil:	E.A. Ticianelli	2012-2014	1st term
Bulgaria	Z. Stoynov	2012-2014	1st term
Canada:	A. Chen	2010-2012	1st term
Chile:	M.S. Ureta	2010-2012	2nd term
China:	Z. Liu	2010-2012	1st term
Croatia:	S. Komorsky-Lovric	2012-2014	2nd term
Czech Republic	M. Hromadova	2010-2012	1st term
Denmark:	Qingfeng Li	2012-2014	1st term
Estonia:	A. Jänes	2011-2013	2nd term
Finland:	R.-M. Latonen	2011-2013	1st term
France:	N. Pébère	2011-2013	1st term
Germany:	H. Baltruschat	2012-2014	1st term
Greece:	S. Bebelis	2010-2012	1st term
Hungary:	L. Peter	2011-2013	1st term
Iran:	M.F. Mousavi	2010-2012	2nd term
Ireland:	E. Marsili	2010-2012	1st term
Israel:	A. Vaskevich	2011-2013	1st term
Italy:	R. Seeber	2010-2012	2nd term
Japan:	T. Matsue	2011-2013	1st term
Korea:	I.-H. Yeo	2010-2012	1st term
Lithuania:	R. Ramanauskas	2011-2013	2nd term
Mexico:	C. Frontana	2012-2014	1st term
Netherlands:	M. van Brussel	2010-2012	1st term
Norway:	S. Sunde	2010-2012	1st term
Poland:	P. Kulesza	2010-2012	2nd term
Portugal:	J.M. Palma Correia	2012-2014	1st term
Romania:	L. Muresan	2012-2014	2nd term
Russia:	A. Nekrasov	2010-2012	2nd term
Serbia:	A. Dekanski	2011-2013	1st term
South Africa:	K. Ozoemena	2010-2012	1st term
Spain:	C. Müller	2011-2013	2nd term
Sweden:	F. Björefors	2010-2012	1st term
Switzerland:	C. Comninellis	2010-2012	1st term
Ukraine:	O. Linyucheva	2010-2012	1st term
United Kingdom:	T. Albrecht	2011-2013	1st term
USA:	V.F. Lvovich	2012-2014	1st term
Venezuela:	J. Mostany	2010-2012	1st term

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DECHEMA e.V., Germany
Indian Society for ElectroAnalytical Chemistry (ISEAC)
Laboratory of Physical Chemistry and Electrochemistry, Finland
Paul Scherrer Institut, Switzerland
Technical Faculty Bor, Serbia

Co-operation with other Societies

ISE is an Associated Organization of IUPAC and has co-operation agreements with:

•Bioelectrochemical Society (The)
•Chinese Society of Electrochemistry
•Deutsche Gesellschaft für Galvano- und Oberflächentechnik (DGO)
•Electrochemical Division of the Italian Chemical Society
•Electrochemical Society (The)
•Electrochemical Society of Japan
•Electrochemistry and Electroanalytical Division of the Brazilian Chemical Society
•Electrochemistry Group of the French Society of Chemistry
•European Federation of Corrosion
•European Association for Chemical and Molecular Sciences
•Fachgruppe Angewandte Elektrochemie der Gesellschaft Deutscher Chemiker (Section Applied Electrochemistry of the Society of German Chemists)
•Korean Electrochemical Society
•Mexican Electrochemical Society
•Sociedad Iberoamericana de Electroquimica

ISE Honorary Members

Honorary Members are appointed by the Executive Committee, after consultation with the Council, primarily in recognition of their contribution to ISE. The total number at any time is limited to ten.

The first Honorary Member of ISE, appointed in the year 2003, was **Otmar Dossenbach**, Treasurer of the Society for 21 years (1980-2000) and Executive Secretary for 2 years (2001-2002).
Two new Honorary Members were appointed in the year 2004: **Roger Parsons** and **Sergio Trasatti**, former Presidents of the Society.
Three Honorary Members were appointed in the year 2005: **Ron Armstrong**, former Editor-in-Chief of Electrochimica Acta for 18 years, **Elton Cairns** and **Dieter Landolt**, former Presidents of the Society,
One Honorary Members was appointed in the year 2011: **Sharon Roscoe**, former Secretary General of the Society.

ISE Fellows

In recognition of their scientific or technical contributions to electrochemistry, the Society may confer on individual members the distinction of ISE Fellowship. Such ISE Fellows are appointed by the Executive Committee after consultation with the Council. The appointment does not carry with it automatic life-time ISE membership.

The present Fellows of ISE are:

H. Abruña
A. Aldaz
R. Alkire
C. Amatore
D. Aurbach
P. Bartlett
J. O'M. Bockris
A. Bond
E. Cairns
C. Comninellis
R. Compton
S. Cosnier
P. Delahay
W. Fawcett
J. Feliu
C. Gabrielli
E. Gileadi
H. Girault
R. Guidelli
J. Heinze
R. Hillman
G. Inzelt
T. Kakiuchi
H. Kim
D. Kolb
A. Kornyshev
O. Lev
J. Lipkowski
D. Macdonald
P. Marcus
R.A. Marcus
N. Markovic
J. McBreen
R. Nichols
T. Osaka
D. Schiffrin
W. Schmickler
B. Scrosati
U. Stimming
S. Sun
Z. Tian
J. Ulstrup
P. Unwin
K. Uosaki
C. Vayenas
M. Watanabe
A. Wieckowski
G. Wilson

Society Awards

Electrochimica Acta Gold Medal

The Electrochimica Acta Gold Medal may be awarded every two years to the person judged to have made the most significant contribution to electrochemistry in recent years.

Frumkin Memorial Medal

The Frumkin Memorial Medal may be given once every two years. It recognises the outstanding contribution of a living individual over his/her life in the field of fundamental electrochemistry.

Prix Jacques Tacussel

The Prix Jacques Tacussel may be awarded every two years to a person who has made important contributions to an electrochemical technique.

Katsumi Niki Prize for Bioelectrochemistry

The Katsumi Niki Prize for Bioelectrochemistry may be awarded every two years to a scientist who has made an important contribution to the field of bioelectrochemistry.

Bioelectrochemistry Prize of ISE Division 2

The Bioelectrochemistry Prize of ISE Division 2 may be awarded every two years to a scientist who has made an important contribution to the field of bioelectrochemistry.

Brian Conway Prize for Physical Electrochemistry

The Brian Conway Prize for Physical Electrochemistry may be awarded every two years, in recognition of the most successful achievements in Physical Electrochemistry in recent years.

Alexander Kuznetsov Prize for Theoretical Electrochemistry

The Kuznetsov Prize is awarded every two years to a living individual who has made groundbreaking contribution to the theory of electrochemical phenomena.

Tajima Prize

The Tajima Prize recognises the contributions made by younger electrochemists. Candidates must be less than 40 years old. An award may be made every year. The decision of the Award Committee will be based on published work.

Hans-Jürgen Engell Prize

The Hans-Jürgen Engell Prize may be awarded annually to a young electrochemist on the basis of published work in the field of corrosion, electrodeposition or surface treatment.

Oronzio and Niccolò De Nora Foundation Young Author Prize

The Oronzio and Niccolò De Nora Foundation Young Author Prize may be awarded annually to a scientist of less than 30 years for the best paper published in the ISE society journal in the calendar year preceding the award.

ISE Prize for Environmental Electrochemistry

The ISE Prize for Environmental Electrochemistry may be awarded annually to a scientist of less than 35 years of age on January 1 of the year of the award, for recent application-oriented achievements in the field of environmental electrochemistry.

ISE Prize for Applied Electrochemistry

The ISE Prize for Applied Electrochemistry may be awarded annually to a scientist of less than 35 years of age on January 1 of the year of the award, for recent achievements in the field of applied electrochemistry.

Electrochimica Acta and ISE Travel Award for Young Electrochemists

The Electrochimica Acta Travel Awards for Young Electrochemists are aimed at favouring the participation of young electrochemists in the ISE Annual Meetings. The applicants must be ISE members. They must have obtained their Ph.D. not earlier than 6 years before the deadline for applications.

ISE Meeting Sponsorship

What is an ISE sponsored meeting?

You may have noticed that scientific meetings in the field of electrochemistry are often labelled "ISE sponsored Meeting". What does this mean? In addition to organizing its own meetings, such as the Annual ISE Meeting, Divisional Meetings (organized by one or several ISE Divisions) and National or Regional meetings (organized by one or several National ISE Sections), ISE may sponsor other international scientific meetings in the area of electrochemistry. ISE sponsorship is intended to be a sign of quality for the meeting.

What are the requirements for ISE sponsorship?

ISE requires that the scientific quality of the meeting reaches the standard of its own meetings. It is desirable that the advisory board consists of ISE members, as far as possible.

Who decides?

The decision is normally taken by the officers of the ISE Division in whose field of interest the topic of the meeting lies. ISE Division Officers should be involved in the organisation of the meeting. The ISE Executive Committee decides on the sponsorship for meetings of general interest.

What are the obligations of the organizers?

The organizers have to publicise the ISE sponsorship in all the official documents related to the meeting (announcements, program, website etc.). At the meeting, a representative of ISE must be allowed to say a few words on behalf of the Society, and ISE must have the opportunity to advertise. After the meeting, the organizers should submit a short report to ISE to be published on the ISE website.

What do the organizers receive from ISE?

ISE publishes announcements and reports of ISE sponsored meetings on its website. The ISE Office can organize, free of charge, mailings to all, or a group of ISE members. In appropriate cases, there may be a special issue of Electrochimica Acta associated with these meetings. Decisions about special issues are made by the Editor-in-Chief.

What about money?

ISE sponsorship of a meeting does not necessarily include a financial contribution from ISE. The sponsoring Division(s) may use its funds to support such a meeting. The level of financial contribution will be determined by the Division(s), but a typical sum may be 500 Euros.

How to apply for ISE sponsorship?

If you would like to have the scientific meeting you are organizing sponsored by ISE, please send an e-mail to the ISE Office, at least one year in advance of the time of the meeting, and attach a completely filled in sponsor request form. This form can be found on the ISE website at: http://ise-online.org/sponsmeet/info.php. The decision will be taken by the Officers of the sponsoring Division(s), or by the Executive Committee, and the ISE Office will inform the applicant.

ISE Regional Student Meetings

Graduate Students who are members of ISE and intend to organize a Regional Student Meeting can apply for ISE financial support. Applications submitted by Graduate Students jointly with their supervisors or with other senior members of the staff of their university are also acceptable, but it is expected that the students will be engaged in the organizational aspects of the meeting as much as possible. Regional Student Meetings are typically one-day meetings involving graduate students active in the geographic area where the meeting takes place. The format of the meeting (oral presentations, posters, discussion sessions, other) is autonomously decided by the organizers who will be responsible for securing a venue and collecting registrations. No registration fee should be requested, if financially possible. When the Regional Student Meeting is associated to a larger ISE-sponsored meeting taking place in the same venue, the application must provide clear indication on the connections between the two events and must clearly describe the independent activities reserved to student participants. No later than one month after the meeting, the organizer(s) will send to the ISE Office a report on the event, including the names and the e-mail addresses of the participants. The student participants will be invited to apply for ISE membership. A report giving an overview of the meeting, accompanied by suitable pictures if available, will be posted on the ISE website under Student Activities.

Applications for ISE support must be sent by e-mail to the ISE Office, with a copy to the Regional Representative of the country where the meeting is organized, 3-12 months before the meeting date, using the application form. The local ISE Regional Representative, if requested, will assist the potential meeting organizer in the preparation of the application. Applications will be analyzed by a committee consisting of (i) ISE Immediate Past President (ii) ISE Secretary General, (iii) ISE Treasurer, (iv) ISE Vice President responsible for Educational Activity and (v) ISE Vice President responsible for Regional Sections. The response will be communicated to the applicant and to the relevant Regional Representative no later than 1 month after the application submission.

The maximum financial support will be 600 €; the expected use of the funds must be specified in the application. Co-sponsoring by other Societies and/or institutions is possible.

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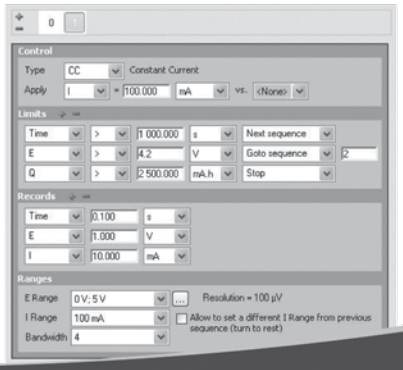

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Monday Poster presentations Session I

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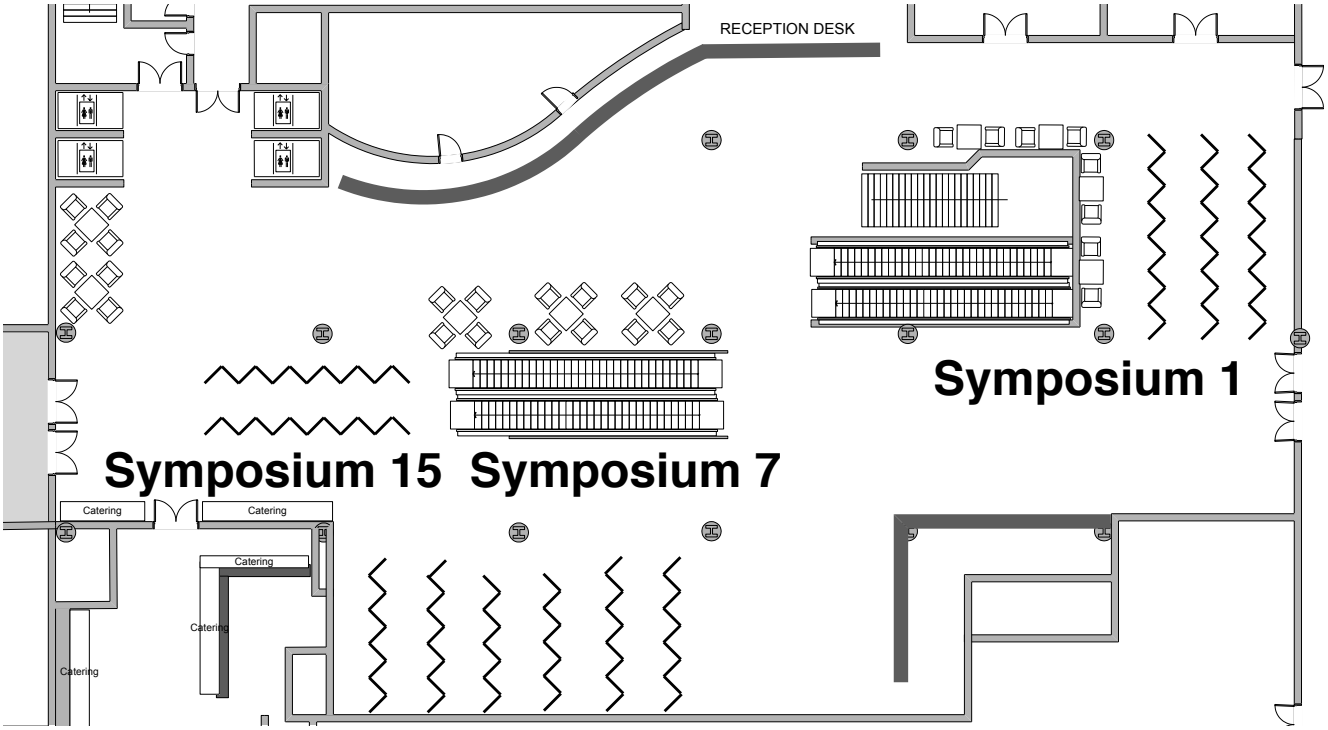

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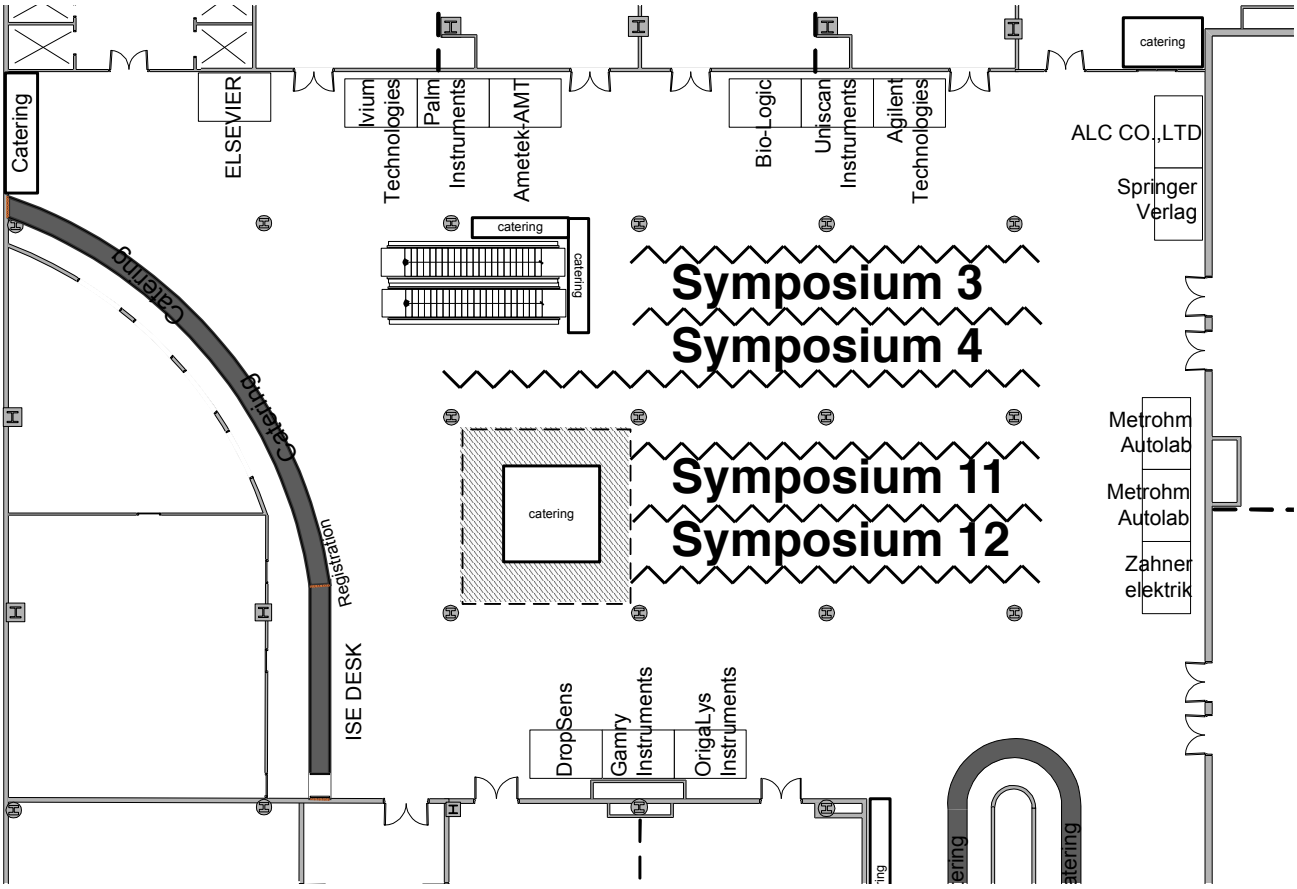
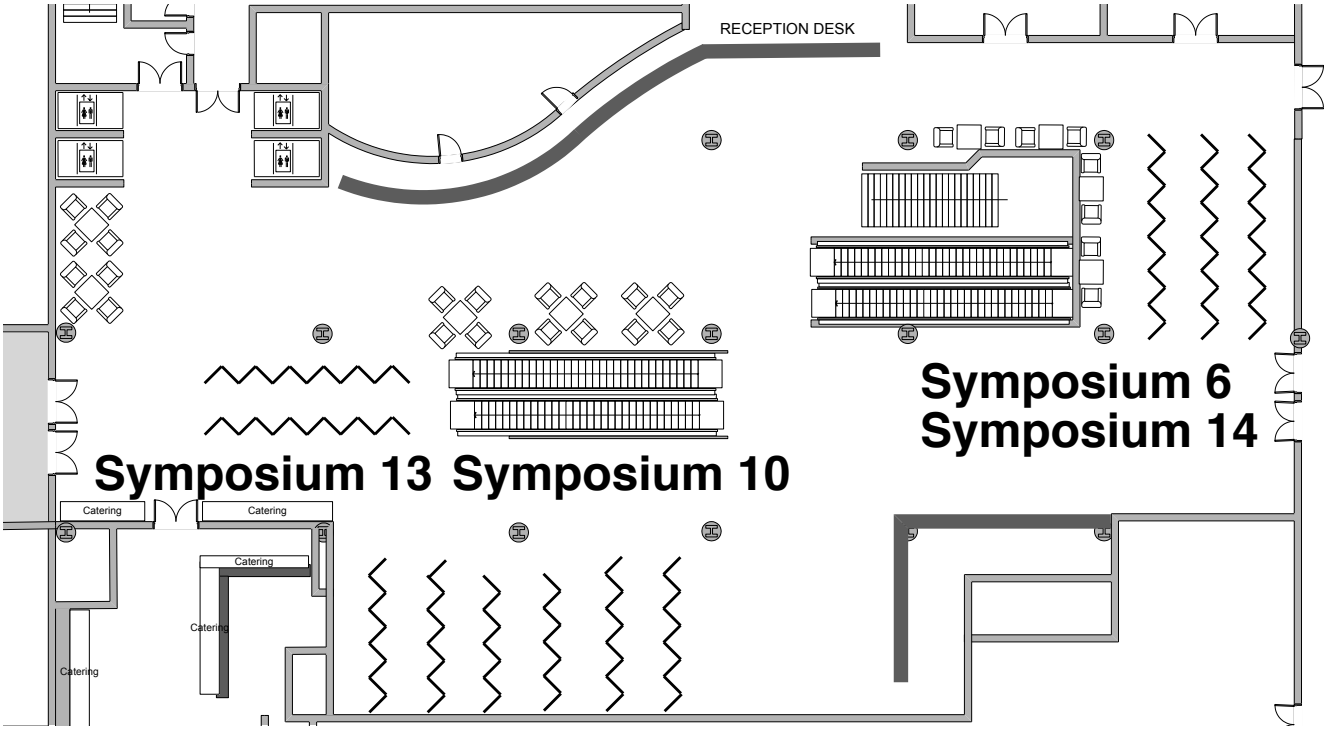


Tuesday Poster presentations Session II

2nd Floor



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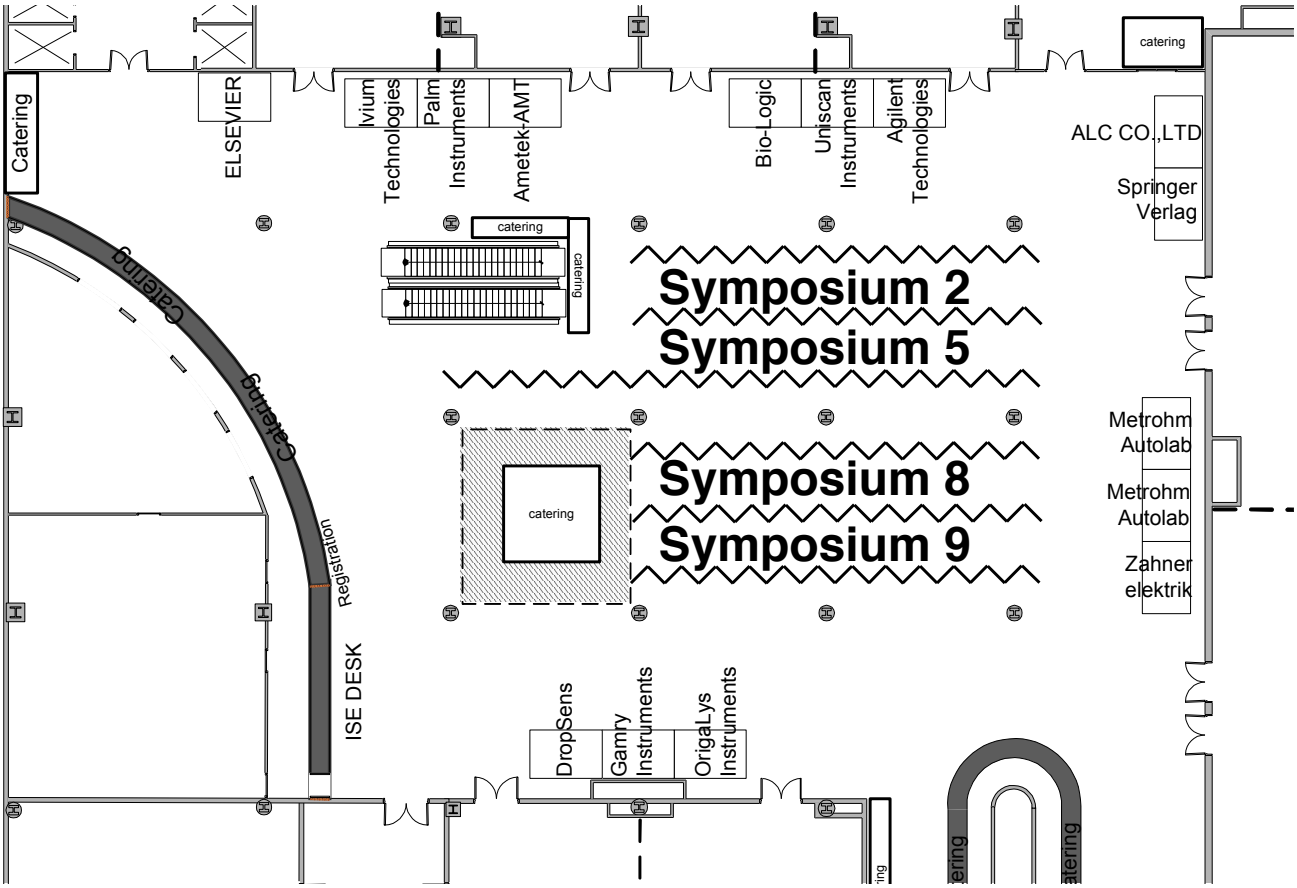

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Tuesday:	09:30-20:00
Wednesday:	09:30-12:00