The 64th Annual Meeting of the International Society of Electrochemistry

Electrochemistry for a New Era

8 - 13 September 2013, Santiago de Querétaro, Mexico

Contents list

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

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Welcome Address

On behalf of ISE's Executive Committee and Organizing Committee, we warmly welcome you to Mexico and to Querétaro. We look forward to your participation in the 64th Annual Meeting of the ISE, "Electrochemistry for a New Era" from September 8th – 13th, 2013.

Querétaro was founded in 1510, and its beautiful historic center is exceptionally well preserved. The historic downtown was declared a World Heritage Site by UNESCO for its rich history and unmatchable collection of baroque-style mansions, houses, and churches. Mexico's independence from Spain began in the heart of downtown Querétaro, where conspirators held clandestine meetings to plan their rebellion.

Today, Santiago de Querétaro is entering its own new era. It is one of the fastest growing cities in Mexico. Due to its privileged position in the center of the country and its modern infrastructure and connectivity, many international companies have chosen this city for their operations, resulting in a concentration of new facilities for research, development, and manufacturing in the aeronautic, information technologies, life sciences, automobile, and food and beverage industries. Surrounded by natural and cultural richness, Santiago de Querétaro is one of the most attractive destinations in Mexico for both business and tourism.

The world faces many challenges and opportunities—from addressing and adapting to global warming, improving our environment, developing sustainable sources of energy, and improving quality and access to healthcare. In this new era, Electrochemistry plays an important role, applying cutting-edge science to making the world a better place. Through its scientific, education, and communications activities, ISE is a significant contributor to this effort. It is appropriate that this 64th Annual Meeting involves all the scientific divisions of ISE, emphasizing the links between fundamental understanding at the nanoscale and application at the industrial and societal level.

We acknowledge the efforts of the Organizing Committee, Symposia Organizers and Executive Committee in creating an excellent scientific program. There will be 14 symposiums, including, for the first time, Education in Electrochemistry. We also appreciate the work of the Mexican electrochemistry community, which has collaborated enthusiastically to make the 64th Annual ISE Meeting both successful and memorable.

We welcome all of you, electrochemists and other scientists, and invite you to enjoy our beautiful city, explore this new era of electrochemistry, discuss common challenges, and propose innovative solutions to the problems that face us as we enter this new era.

Ignacio Gonzalez and Yunny Meas
Co-Chairs
Organizing Committee, 64th ISE Annual Meeting

Organizing Committee

Co-Chairs

Ignacio González, *Mexico*
Yunny Meas, *Mexico*

Members

Ernesto Julio Calvo, *Argentina*
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Mark E. Orazem, *USA*
Manuela Rueda, *Spain*
Bernard Tribollet, *France*

Symposium Organizers

Symposium 1: Environmental Electroanalysis

Alan Bond (Coordinator), Monash University, Australia
Alison Downard, University of Canterbury, New Zealand
María Teresa Ramírez, Universidad Autónoma Metropolitana Iztapalapa, Mexico
Margarita Stoytcheva, Instituto de Ingeniería, Universidad Autónoma Baja California, Mexicali, Mexico

Symposium 2: Sensing in Living Systems

Fethi Bedioui (Coordinator), ENSCP, Paris, France
Elena Ferapontova, Aarhus University, Denmark
Susana I. Córdoba de Torresi, Universidad de Sao Paulo, Sao Paulo, Brazil
Xóchitl Domínguez, VITO, Belgium

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

Alexander Kuhn (Coordinator), Université de Bordeaux, France
Woonsup Shin, Sogang University, Republic of Korea
Marcelo Videa, Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico
Miguel Velázquez, Universidad del Papaloapan, Mexico
Miguel Angel González Fuentes, CINVESTAV-Quimica, Mexico

Symposium 4a: Novel Materials and Devices for Energy Storage and Conversion: Electrochemical Capacitors

Elzbieta Frackowiak (Coordinator), Poznan University of Technology, Poland
Ana Karina Cuentas, Instituto de Energías Renovables, UNAM, Temixco, Mexico

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Carlos Ponce de León (Coordinator), University of Southampton, UK
Robert Kostecki, Lawrence Berkeley National Laboratory, USA
Ruben Ornelas-Jacobo, Milan, Italy

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Deborah Jones (Coordinator), CNRS and University of Montpellier 2, France
Robert Slade, University of Surrey, UK
Nicolás Alonso-Vante, Université de Poitiers, France

Symposium 4d: Novel Materials and Devices for Energy Storage and Conversion: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Alejandro Franco (Coordinator), Université de Picardie Jules Verne/CNRS, Amiens, France
Omar Solorza, CINVESTAV-Quimica, Mexico
Kourosh Malek, NRC, Vancouver, Canada

Symposium 5: Corrosion Processes at the Nanoscale

Mary Ryan (Coordinator), Imperial College of London, UK
Roger Newman, University of Toronto, Canada
Facundo Almeraya, Centro de Investigación e Innovación en Ingeniería Aeronáutica-UANL, Mexico
María Aurora Veloz, Universidad Autónoma del Estado de Hidalgo, Mexico

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Pawel Kulesza (Coordinator), University of Warsaw, Poland
Marina E. Rincón, Instituto de Energías Renovables, UNAM, México
Gerko Oskam, Centro de Investigación y Estudios Avanzados, Unidad Mérida, Mexico
Bernardo A. Frontana-Uribe, Centro Conjunto de Investigación en Química Sustentable ,UAEMex-UNAM, Mexico

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Giovanni Zangari (Coordinator), University of Virginia, USA
Kurt Hebert, Iowa State University, USA
Stanko Brankovich, University of Houston, USA
Benjamín Scharifker, Universidad Metropolitana, Venezuela
Manuel E. Palomar-Pardavé, Universidad Autónoma Metropolitana-Azcapotzalco, Mexico
Luis H. Mendoza, Universidad Autónoma del Estado de Hidalgo, Mexico

Symposium 8: Electrochemical Engineering for Green Processing

François Lapicque (Coordinator), CNRS-Université de Lorraine, Nancy, France
Giovanni Zangari, University of Virginia, USA
Mercedes Teresita Oropeza, Ce. de Investigación y Desarrollo Tecnológico en Electroquímica, Querétaro, Mexico
José Luis Nava, Universidad de Guanajuato, Mexico
Juan Manuel Peralta-Hernández, Centro de Innovación Aplicada en Tecnologías Competitivas, CIATEC, Mexico

Symposium 9: Electrochemistry in the Mining Industry: Fundamentals, Mineral Processing, Metal Recovery and Environmental Issues

Isabel Lázaro (Coordinator), Universidad Autónoma de San Luis Potosi, Mexico
Roel Cruz, Universidad Autónoma de San Luis Potosi, Mexico
Mark E. Orazem, University of Florida, Department of Chemical Engineering, Gainesville, USA
Alain Walcarius, CNRS, Université de Lorraine, France

Symposium 10: Molecular and Computational Electrochemistry of Molecules with Biological and Pharmacological Activity

Marilia Goulart (Coordinator), Federal University of Alagoas, Brazil
Eckhard Spohr, Institute of Theoretical Chemistry, University of Duisburg-Essen, Germany
Felipe J. González, Centro de Investigación y Estudios Avanzados, Distrito Federal, Mexico

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis and Electrocatalysis

Carlos Frontana (Coordinator), Centro Investigación y Desarrollo Tecnológico en Electroquímica, Querétaro, Mexico
Jay Wadhawan, University of Hull, UK
Luis F. Cházaro, Instituto Potosino de Investigación Científica y Tecnológica, San Luis Potosi, Mexico

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface

Michael Eikerling (Coordinator), Simon Fraser University, Burnaby, Canada
Elena Savinova, Université de Strasbourg, France
René Antaño, Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Querétaro, Mexico
Ezequiel Pedro Marcos Leiva, Universidad Nacional de Córdoba, Argentina
Roxana Larios-Duran, Universidad de Guadalajara, CUCEI, Mexico

Symposium 13: Education in Electrochemistry

Jorge G. Ibanez (Coordinator), Universidad Iberoamericana-Mexico City, Mexico
Alanah Fitch, Loyola University of Chicago, USA
Geraldine G. Botte, Ohio University, USA
Antonio Aldaz, Alicante University, Spain
Christopher Brett, Universidade de Coimbra, Portugal

Symposium 14: General Session

Lin Zhuang (Coordinator), Wuhan University, China
Hamilton Varela, Instituto de Quimica de Sao Carlos da Universidade de Sao Paulo, Brazil
Roberto Torresi, Universidad de Sao Paulo, Brazil
Marino Dávila, Benemérita Universidad Autónoma de Puebla, Mexico
Raúl Ortega, Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Querétaro, Mexico

Tutorial Lectures

Sunday, 8 September 2013

Location: Holiday Inn Centro Historico

Ave 5 De Febrero No 110, 76010 Queretaro

13:00 to 17:30

Tutorial 1

Multiscale Modeling Methods for the Simulation of Electrochemical Devices for Energy Conversion and Storage

Bridging the gap between materials atomistic/structural properties and macroscopic behaviour of electrochemical devices for energy conversion and storage

Alejandro A. Franco, *Université de Picardie Jules Verne/CNRS, Amiens, France*

Michael Eikerling, *SFU, Vancouver, Canada*

Location: Holiday Inn Centro Historico

Ave 5 De Febrero No 110, 76010 Queretaro

13:00 to 16:30

Tutorial 2

Microbial Electrocatalysis

Understanding the underlying principles of microbial electrocatalysis and expanding the knowledge for high quality design, operation and characterization of these systems

Korneel Rabaey, *Ghent University, Belgium*

Xochitl Dominguez-Benetton, *Flemish Institute for Technological Research-VITO, Belgium*

Plenary Lectures

Location: Auditorium

Monday, 9 September 2013

09:40 to 10:40

Michael Grätzel
(EPFL, Lausanne, Switzerland)

Photo-electrochemical Cells for the Generation of Electricity and Fuels from Sunlight

Tuesday, 10 September 2013

08:30 to 09:30

Richard L. McCreery
(University of Alberta, Edmonton, Canada)

A merger of Electrochemistry and Molecular Electronics

Thursday, 12 September 2013

08:30 to 09:30

Douglas R. MacFarlane
(Monash University, Clayton, Australia)

Ionic Liquids in Electrochemical Devices and Processes – From Solar Cells and Water Splitting to Thermocells

Friday, 13 September 2013

08:30 to 09:30

Fritz Scholz
(Universität Greifswald, Germany)

The Interaction of Oxygen Free Radicals with Electrode Surfaces

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UNIVERSIDAD AUTÓNOMA METROPOLITANA-IZTAPALAPA, MÉXICO

ISE Prize Winners 2012

Electrochimica Acta Gold Medal

Masahiro Watanabe, *University of Yamanashi, Japan*

08:30 to 09:30, Wednesday, 11 September 2013, Plenary Lecture, Auditorium

Development of Advanced Materials for Fuel Cells Based on New Concepts

Prof. Watanabe graduated the master course of Yamanashi University in 1968 and received his PhD. degree in Physical Chemistry from the University of Tokyo in 1976. He has been a Professor of University of Yamanashi and was the Director of Clean Energy Research Center (CERC) until March of 2009 and is currently the Director of Fuel Cell Nanomaterials Center (FCNC). He has contributed to the advancement of hydrogen economy for more than 40 years mostly through the basic research on fuel cell materials. His outstanding achievements include bimetallic alloy catalysts with enhanced catalytic activity for various type fuel cells, robust hydrocarbon electrolyte membranes, high performance hydrogen production and purification catalysts. All of his works are deemed most important and essential subjects for the commercialization of PEFCs, PAFC or SOFC, of which more than 280 have been published in highly reputed international journals. Citation of papers of his research group in the international journals is beyond 12,000 times totally and more than 1400 times every year in the recent years. He has been awarded many prizes to these works. Currently he is promoting big national projects such as « HiPer-FC Project, being funded ca. 70 million € for 7 years » etc. as the leaders at the centers mentioned above.

Bioelectrochemistry Prize of ISE Division 2

Arkady Karyakin, *Moscow State University, Russia*

10:50 to 11:30, Monday, 9 September 2013, Symposium 3, Salon 307

Principles of Direct (Mediator Free) Bioelectrocalaysis

Arkady A. Karyakin is professor of chemistry, head of the Electrochemical Methods Laboratory, Chemistry faculty of M.V. Lomonosov Moscow State University (MSU). He graduated from MSU in 1981, receiving his Ph.D. and D.Sc. in 1986 and 1996, respectively. Starting from 2010 A.A. Karyakin is Associate Editor of Electroanalysis (Wiley). He also serves as editorial board member on numerous journals including Electrochemistry Communications and Talanta (Elsevier). He is author of more than 100 papers and contributor to the Encyclopedia of Sensors. He has received several awards in chemistry including the Russian Presidential Award. In 2011 A.A. Karyakin was elected to European Academy (Europaea).

Brian Conway Prize for Physical Electrochemistry

Hector D. Abruña, *Cornell University, Ithaca, USA*

10:50 to 11:30, Monday, 9 September 2013, Symposium 4b, Hall C

Operando Methods for Characterization of Fuel Cell and Battery Materials

Professor Abruña, Emile M. Chamot Professor of Chemistry is Director of the Energy Materials Center at Cornell (emc2) and the Center for Molecular Interfacing (cmi). He completed his graduate studies with Royce W. Murray and Thomas J. Meyer at the University of North Carolina at Chapel Hill in 1980 and was a postdoctoral research associate with Allen J. Bard at the University of Texas at Austin. After a brief stay at the University of Puerto Rico, he came to Cornell in 1983. He was Chair of the Department of Chemistry and Chemical Biology from 2004-2008.
Prof. Abruña has been the recipient of numerous awards including a Presidential Young Investigator Award, Sloan Fellowship, J. S. Guggenheim Fellowship and J. W. Fulbright Senior Fellow. He is the recipient of the Electrochemistry Award for the American Chemical Society (2008), and the C.N. Reilley Award in Electrochemistry for 2007. He was elected Fellow of the American Association for the Advancement of Science in 2007, member of the American Academy of Arts and Sciences in 2007 and Fellow of the International Society of Electrochemistry in 2008. He received the D. C. Grahame Award from the Electrochemical Society for 2009 and most recently, the Faraday Medal of the Royal Society for 2011. Prof. Abruña is the co-author of over 370 publications and has given over 500 invited lectures world-wide. Out of the 40 students that, to date, have obtained a Ph.D. under his direction, 12 have gone on to faculty positions.

ISE Prize Winners 2012

Tajima Prize

Jaeyoung Lee, *GIST, Gwangju, Korea*

15:40 to 16:20, Monday, 9 September 2013, Symposium 8, Salon 305

Fe-Metal Alloy onto Nanostructured Carbon for Oxygen Electrocatalysis

Prof. Dr. Jaeyoung Lee is a Vice Director at the Ertl Center for Electrochemistry and Catalysis and an associate professor at School of Environmental Science and Engineering in Gwangju Institute of Science and Technology (GIST), South Korea. He received the doctoral degree in 2001 from Fritz-Haber-Institut der Max-Planck-Gesellschaft and Free University of Berlin, Germany, with guidance of Prof. Dr. Gerhard Ertl (Nobel Laureate 2007). He was a senior scientist at Environment and Energy Research Center, Research Institute of Industrial Science and Technology (RIST, 2002-2004) and at Fuel Cell Research Center, Korea Institute of Science and Technology (KIST, 2004-2007) where he developed a stable and cost-effective electrode and system for portable polymer electrolyte fuel cells and water treatment. Prof. Lee is now trying to apply his experience in basic studies to the development and optimization of a number of electrochemical processes for bio-compatible fuel cells, metal-air batteries, hydrogen from small organic molecules, fuels from CO_2 and capacitive deionization.

Hans-Jürgen Engell Prize

Shahzada Ahmad, *Abengoa Research, Sevilla, Spain*

10:40 to 11:20, Friday, 13 September 2013, Symposium 6, Hall D

Electrical Field Assisted Growth of Polymers: Electrode Materials for Energy Applications

Born in India, and obtained his Ph.D (2006) from National Physical laboratory, New Delhi in Materials Science/Polymers to complement his MS in Materials Chemistry (2002). He continued his research on energy devices and later moved to Max-Planck-Institute for Polymer Research, as an Alexander von Humboldt Fellow in 2008 to work with Prof. H.-J. Butt on the growth and interface studies of electrodeposited polymers in ionic liquids. He is also a regular visitor in Professor Michael Grätzel's group at EPFL, where he developed nanoporous films for electro-catalysis and demonstrated record power conversion efficiencies. He has made significant contributions in the use of electrodeposited conducting polymers as a catalyst in dye-sensitized solar cells. His research targets lies in energy conversion, energy conservation and energy storage materials. Currently (2012) he holds the position of Senior Scientist at Abengoa Research, Spain.

ISE Prize for Applied Electrochemistry

Karl Mayrhofer, *Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany*

11:20 to 11:40, Thursday, 12 September 2013, Symposium 4c, Salon 301

Stability of Electrocatalysts for Electrochemical Energy Conversion

Karl Mayrhofer, born 1977 in Austria, is currently group leader of the Electrocatalysis group in the department of Interface Chemistry and Surface Technology of Prof. Martin Stratmann at the Max-Planck-Institut für Eisenforschung, Germany. He received his Ph.D .from the Technical University of Vienna under the supervision of Prof. Fabjan, after he had spent a two-year research stay in the group of Dr. Nenad Markovic at the Lawrence Berkeley National Laboratory, USA. From 2006 to 2009 he was an Erwin-Schroedinger Scholar in the junior research group of Dr. Matthias Arenz at the Technical University of Munich, who is now Professor at the University of Copenhagen.
Karl's research focuses on the development of advanced electrochemical methods, the understanding of the fundamentals of the electrode-electrolyte interface during reactions, as well as the conceptual design of novel materials for the electrocatalytic energy conversion. He is co-author on more than 35 publications on fundamental and applied issues of electrochemistry, which are already cited more than 1700 times. Most recently, his group has developed a novel tool for high-throughput characterization of catalyst materials with online characterization of reaction and degradation products, with which he will in future tackle some of the crucial issues of reaction selectivity and electrode stability.

ISE Prize Winners 2012

ISE Prize for Environmental Electrochemistry

Adam Vojtech, *Brno University of Technology, Brno, Czech Republic*

14:20 to 15:00, Tuesday, 10 September 2013, Symposium 1, Salon 306

Environmental Electro Metallomics

Vojtech Adam, Ph.D., is an associate professor at Department of Chemistry and Biochemistry, Faculty of Agronomy, Mendel University in Brno and Senior Researcher at Central European Institute of Technology, Brno University of Technology. His diploma thesis in the exploring of the use of sulphur-containing peptides and proteins as biological part of the biosensor for detection of heavy metals was successfully defended at Department of Analytical Chemistry, Masaryk University in the field of Analytical Chemistry. He received a Ph.D. in the field of Cellular and Molecular Biology at Masaryk University, where he worked on using of electrochemical techniques in cancer diagnosis. He is an author of more than 150 ISI indexed papers with more than 2 500 citations and H index 28. His research is mainly focused on cell metallome.

Oronzio and Niccolò De Nora Foundation Young Author Prize

Quentin Van Overmeere, *Université Catholique de Louvain, Belgium*

17:20 to 17:40, Monday, 9 September 2013, Symposium 5, Constitucion

Pore Initiation and Growth in Anodic Alumina: Looking from within the Electrolyte

Quentin Van Overmeere was born in 1983 in Belgium. He obtained his Chemical Engineering degree from the Université Catholique de Louvain in 2006. He then started graduate studies in Materials Engineering, under the supervision of Joris Proost. During his doctoral studies, Quentin developed a high-resolution curvature measurement technique to monitor the internal stresses *in situ* during the growth of anodic oxide films. The technique was used to investigate growth instabilities such as breakdown and pore initiation during zirconium and aluminum anodizing.
In 2011, Dr. Van Overmeere was awarded a postdoctoral fellowship from the Fonds de la Recherche Scientifique (FNRS) and subsequently joined the group of Shriram Ramanathan at Harvard University. He is currently developing multifunctional oxide electrodes for advanced, low temperature solid oxide fuel cells.

Electrochimica Acta Travel Award Winners 2013

Serhiy Cherevko, *Düsseldorf, Germany*
Fabio La Mantia, *Bochum, Germany*

ISE Travel Award Winners 2013

Juan Manuel Artés, *Barcelona, Spain*
Christopher Bell, *Oxford, United Kingdom*
Christian Durante, *Padova, Italy*
Csaba Janáky, *Szeged, Hungary*
Carmen Jimenez Borja, *Ciudad Real, Spain*
Wojciech Nogala, *Warsaw, Poland*
Giovanni Valenti, *Bologna, Italy*
Yige Zhou, *Toronto, Canada*

ISE Society Meetings

Monday, 9 September 2013

Opening Ceremony
09:00 to 09:40 › Auditorium

Monday, 9 September 2013

Division Officers Meeting- Luncheon Meeting
13:10 to 14:10 › Room 301

Monday, 9 September 2013

Regional Representatives Meeting - Luncheon Meeting
13:10 to 14:10 › Room 302

Tuesday, 10 September 2013

Council Meeting -Luncheon Meeting
13:10 to 14:10 › Room 301

Thursday, 12 September 2013

General Assembly
11:50 to 12:50 › Hall D

Division Luncheon Meetings
13:10 to 14:10
Division 1 Analytical Electrochemistry › Room 301
Division 2 Bioelectrochemistry › Room 302
Division 3 Electrochemical Energy Conversion and Storage › Room 303
Division 4 Electrochemical Materials Science › Room 304
Division 5 Electrochemical Process Engineering and Technology › Room 305
Division 6 Molecular Electrochemistry › Room 306
Division 7 Physical Electrochemistry › Room 307

Friday, 13 September 2013

Closing Ceremony
12:30 to 12:50 › Hall D

See room locations on page 166

Poster presentation session 1

Symposium 2, 3, 4a, 4b, 4c, 4d, 9, 10, 12

Poster set-up Monday: 08:30-11:00 *See poster locations map on page 163*
Poster take-down Monday: 19:00-20:00

Poster Presentations: Monday, 9 September: 11:30-13:00

Poster presentation session 2

Symposium 5, 6, 7, 11, 13

Poster set-up Tuesday: 08:30-10:00 *See poster locations map on page 163*
Poster take-down Tuesday: 19:00-20:00

Poster Presentations: Tuesday, 10 September: 10:40-12:30

Poster presentation session 3

Symposium 1, 8, 14

Poster set-up Wednesday: 08:30-10:00 *See poster locations map on page 163*
Poster take-down Thursday: 15:00-17:00

Poster Presentations: Wednesday, 11 September: 11:00-12:30

General Information

On Sunday the registration will take place in **Patio Barroco at the University of Querétaro**.
From Monday until Friday the Registration Desk and the ISE DESK are located on the ground floor of the **Querétaro Congress and Convention Center**.

Registration Hours during the Meeting

Sunday, 8 September.....14:30-18:00
Monday, 9 September 08:00-18:00
Tuesday, 10 September 08:00-18:00
Wednesday, 11 September 08:30-12:00
Thursday, 12 September.....09:00-17:00
Friday, 13 September 09:00-11:00

On Site Registration Fees

Regular (ISE non-members) ..... 760 USD
Regular ISE members ..... 620 USD
Student (ISE non-members)..... 320 USD
Student ISE members..... 250 USD
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.
Monday 13:00-14:00
Tuesday 12:30-14:00
Thursday 13:00-14:00

Coffee Breaks

Monday Morning 11:30-11:50
Tuesday Morning 10:40-11:00
Wednesday Morning 11:00-11:20
Thursday and Friday Morning 10:20-10:40
Afternoons (except Wednesday and Friday).....16:20-16:40

Internet Service

Free wireless internet service is provided on the conference premises.

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 Alison Downard, Symposium 2 Elena Ferapontova (*), Symposium 3 Woonsup Shin
Symposium 4a Elzbieta Frackowiak, Symposium 4b Carlos Ponce de León, Symposium 4c Nicolás Alonso-Vante, Symposium 4d Alejandro Franco, Symposium 5 Mary Ryan, Symposium 6 Pawel Kulesza (*), Symposium 7 Giovanni Zangari, Symposium 8 François Lapicque, Symposium 9 Isabel Lázaro, Symposium 10 Marilia Goulart, Symposium 11 Jay Wadhawan, Symposium 12 Michael Eikerling
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 only on invitation of one of the Guest Editors.**
Submission timespan: 14 September - 15 December 2013.

Social Program

RECEPTIONS

Welcome Reception

Sunday, 8 September, 18:00-20:00 in the Patio Barroco at the University of Querétaro
Address: 16 de Septiembre no. 57, Centro Historico, Santiago de Querétaro

Monday Reception

Monday, 9 September, 18:30-20:00 on the 3rd floor of the conference premises in the Querétaro Congress and Convention Center

Tuesday Reception

Tuesday, 10 September, 18:30-20:00 on the 3rd floor of the conference premises in the Querétaro Congress and Convention Center

EXCURSIONS

Wednesday, 11 September

You can choose among 5 different excursions that will be organized on Wednesday afternoon, 11 September 2013. The excursions 39 Queretaro's Aromas and Flavours Tour, 4) Magical Bernaland 5) Magic Town Cadereyta De Montes depart at 13:00 from Querétaro Congress and Convention Center with English speaking tour guides.
The excursions 1) Walking Tour "Charming Patios" and 2) Trolley Tour will depart from the city center from a place to be communicated.

1) Walking Tour "Charming Patios"

This walking tour will lead you to the baroque architecture that characterizes the colonial city of Querétaro, declared as World Cultural Heritage Site by UNESCO in 1996. You will learn some historical tales and data as well as the uses and customs of the people who built and lived in the city's splendid houses.
Duration 3 hours and 30 minutes
Including transportation and certified guide
Minimum 25 PAX
Price: USD$ 53.00

2) Trolley Tour

On this trolley tour through the historic center of Querétaro you can admire the most representative catholic churches, the outstanding baroque facades as well as the main monuments of the city such as the splendid aqueduct with its 74 semicircular stone arches, the historic Theater of the Republic, to mention but a few.
Duration 2 hours and 40 minutes
(2 hours in trolley and 40 minutes of walking)
Including transportation and certified guide
Price: USD$ 33.00

3) Queretaro's Aromas and Flavours Tour

This tour provides a great opportunity to enjoy the wide variety of delicious dishes from Querétaro. You will visit Querétaro's historic center with its restaurants, ice cream shops, bakeries and traditional taverns. There you will have the opportunity to taste a traditional meal, lemon ice cream, local red wine, typical candy made from goat's milk, corn gordita, beer served with regional snacks. You will receive several vouchers to redeem for food in the places indicated on the city map.
Minimum 25 PAX
Including transportation and certified guide
Price: USD$ 59.00

4) Magical Bernal

This fascinating tour will lead you at first to the beautiful colonial village of San Sebastian Bernal. It is known for its enormous monolith, Pena de Bernal, the third tallest monolith in the world. While in this magical town you will visit the San Sebastian Temple and the famed wool textile manufacturers. Followed by a visit to the Freixenet cellars where you will learn how Champenoise wine is made and even taste some of this regional wine. At the end of this adventure there will be some free time for shopping in the cobblestone streets of the town of Tequisquiapan.
Duration approximately 8 hours
Including transportation, 1 lunch per person, access to various sites, wine tasting in Freixenet and certified guide
Minimum 25 PAX
Price: USD$ 59.00

5) Magic Town Cadereyta De Montes

On this tour you will have the opportunity to discover several tourist attractions of the State of Querétaro: You will visit the cheese farm, Finca Vai and learn about the cheese making process as well as sample delicious cheeses produced from cow milk. Thereafter you will visit La Redonda Vineyards, producing 17 types of wine from 15 varieties of grapes. In the famous cactus greenhouse called Finca Schmoll, where a large collection of 4800 desert plants is being preserved, you will be taught how to transplant and grow a cactus.
Duration approximately 8 hours
Including transportation, 1 lunch per person, access to various sites, wine tasting and certified guide
Minimum 25 PAX
Price: USD$ 65.00

Gala Dinner

Fiesta Mexican in "La Casona de los Cinco Patios" in the city center of Querétaro
Address: 5 de Mayo 39, Centro, Santiago de Querétaro
PRICE: USD$ 60.00

Oral presentation program

Monday 9 September 2013

ROOM	Auditorium	Hall C	Hall D	Salon 301	Salon 302	Salon 303	Salon 304	Salon 305	Salon306	Salon 307	Salon 308	Constitución
09:00 -09:40	Opening Cermony											
09:40 -10:40	**Plenary Lecture** Michael Grätzel											
	Symposium 4c	**Symposium 4b**	**Symposium 6**	**Symposium 4c**	**Symposium 6**	**Symposium 11**	**Symposium 7**	**Symposium 8**	**Symposium 1**	**Symposium 3**	**Symposium 14**	**Symposium 5**
10:50 - 11:10	E. Batista	H. Abruna	J. Heinze	K. Rabaey		A. Pombeiro	H. Deligianni	Aicheng Chen	M. Stoytcheva	A. Karyakin	E. Calvo	M. Ferreira
11:10 - 11:30	N. Arjona			C. Traunsteiner				J. M. Peralta H.	G. Lisak			A. Zana
11:30	Coffee Break **Poster Session 1**: Symposium 2, 3, 4a, 4b, 4c, 4d, 9, 10, 12											
13:00	Lunch											
13:10 14:10	Division Officer Meeting: Room 301 – Regional Representatives Meeting: Room 302											
14:20 - 14:40	J. Solla-Gullon	B. Choi	Tremiliosi-Filho	V. Flexer	S. Minteer	Stefan Kurek	A. De Battisti	A. Hubin	A. Walcarius	H. Yang	Y. Pleskov	K. Ogle
14:40 - 15:00	A. De Andrade	H. Schneider		M. Galicia		V. Ramirez		F. Lapicque		E. Gutiérrez-M.	M. O'Connell	
15:00 - 15:20	Weiqi Zhang	Sun-il Mho	J. Calva	Shen-Ming Chen	Z. Stojek	C. Hogan	S. Cattarin	A. Medel	M. de Vidales	Md. A. Rahman	J. Stojadinovic	N. Shakibi Nia
15:20 - 15:40	T. Kallio	A. Rosas-Aburto	F. Caballero-B.	C. Schulz	B. Wouters	J. Ludvik	L. Perini	M. V. Boldrin Z.	S. Delile	M. Gebala	E. Kibena	R. Newman
15:40 - 16:00	Rui Huang	R. Burgos-C.	C. M. Diaz-Acosta	J. Lobato	F. Di Franco	H. Fernández	D. Rosestolato	Jaeyoung Lee	V. Nascimento	A. Nowicka	L. Aldous	A. Estrada-V.
16:00 - 16:10 16:10 - 16:20	Yi Liu	Seung-Tae Hong	I. Mora-Seró	T. Masuda	K. Noworyta	G. Armendariz-V.	D. Cook		J. Barek	J. Casanova-M. R. Milton	A. S. Varela	Kang Shi
16:20 - 16:40			Coffee Break									
16:40 - 17:00	J. Behm	P. Mustarelli	F. Bella	C. Cabrera	M. Wagner	M. Goulart	Sachiko Ono	A. Gago	S. Cosnier	R. Bilewicz	Bing-Wei Mao	N. Birbilis
17:00 - 17:20		J. J. Biendicho	G. Oskam	D. Leech	L. Gorton		F. Blaffart	F. J. Fernandez	G. Val.-Ramirez	R. Ortiz		T. Haufman
17:20 - 17:40	I. A. Rutkowska	K. Chihara	R. Gutkowski	X. Dominguez-B.	L. Ruhlmann	J. Y. Becker	K. Hebert	Y. Alvarez-G.	C. Brett	V. Gonçales	C-A. Schiller	Q. v. Overmeere
17:40 - 18:00	H. M. Villullas	P. Fortgang	P. F. Mendez	M. Yakovleva	C. Campos	T. Fuchigami	A. I. Mardare	C. Jimenez-B.	J. Radecki	F.o Tasca	A. Downard	C. A. González R.
18:00 - 18:20	K. Wippermann	Ryoung-Hee Kim	T. Tamm	A. Fitch	A. Hernandez	Seung Joon Yoo	A. Kuhn		H. Radecka	W. Shin	Kang Uk Lee	Kyoo Young Kim
18:20 - 18:40		S. Watariguchi	G. Zangari	K. Vanbroekhoven	F. Simões	C. M. Sanchez-S.	F. U. Renner			R. Mukhopadhyay		M. Petrova
18:40 - 20:00	Reception			ELSEVIER								

Monday, 9 September 2013 - Morning

Plenary Lecture

Room : Auditorium

Chaired by: Mark Orazem, University of Florida, USA

09:40 to 10:40

Michael Grätzel (Laboratory of Photonics and Interfaces, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland)

Photo-electrochemical Cells for the Generation of Electricity and Fuels from Sunlight

Symposium 1: Environmental Electroanalysis

Room : Salon 306

Chaired by: María-Teresa Ramírez-Silva

10:50 to 11:10 **Invited**

Margarita Stoytcheva (Instituto de Ingenieria, Universidad Autonoma de Baja Califronia, Mexicali, Mexico), Roumen Zlatev

Differential Alternative Pulse Stripping Voltammetry – a Power Tool for Sensitive and High Resolution Multi-Component Analysis

11:10 to 11:30 **Invited**

Grzegorz Lisak (Department of Chemical Engineering, Laboratory of Analytical Chemistry, Åbo Akademi University, Åbo-Turku, Finland), Johan Bobacka, Andrzej Lewenstam

Multicalibrational Procedure for the Dynamic Description of Non-equilibrium Potentiometric Sensors and Analyses in Environmental, Clinical, and Industrial Samples

11:30 **Coffee Break and Poster Session 1**

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

Room : Salon 307

Chaired by: Marcela Ovalle and Woonsup Shin

10:50 to 11:30 **Bioelectrochemistry Prize of ISE Division 2**

Arkady Karyakin (Chemistry Faculty, M.V. Lomonosov Moscow State University, Moscow, Russia)

Principles of direct (mediator free) bioelectrocatalysis

11:30 **Coffee Break and Poster Session 1**

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Francesca Soavi

10:50 to 11:30 **Brian Conway Prize for Physical Electrochemistry**

Hector Abruna (Department of Chemistry & Chemical Biology, Cornell University, Ithaca, USA)

Operando Methods for Characterization of Fuel Cell and Battery Materials

11:30 **Coffee Break and Poster Session 1**

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Deborah Jones and Sebastian Pathiyamattom

10:50 to 11:10

Elisete Batista (Físico-Química, Instituto de Química, Universidade Estadual Paulista, Araraquara, Brazil), Thiago de Abreu, Joana dos Reis

Spectro-electrochemical Study of Ethanol Oxidation on Supported Palladium-gold Electrocatalysts

11:10 to 11:30

Noé Arjona (Investigación y Posgrado, CIDETEQ S.C., Pedro Escobedo, Mexico), Alexander Palacios, Luis Gerardo Arriaga, Janet Ledesma-García, Minerva Guerra Balcázar

Pd/polyaniline composites for ethanol oxidation reaction

11:30 **Coffee Break and Poster Session 1**

Room : Salon 301

Chaired by: Xochitl Dominguez-Benetton and Robert Slade

10:50 to 11:10 **Invited**

Korneel Rabaey (Department of Biochemical and Microbial Technology, Ghent University, Ghent, Belgium)

Converting CO_2 into organic acids using microbial electrosynthesis

11:10 to 11:30

Christoph Traunsteiner (Department of Physics, Technische Universität München, Munich, Germany), Slawomir Sek, Julia Kunze

Electrochemical and Scanning Probe Microscopy Studies of Laccase on modified Au(111) Surfaces

11:30 **Coffee Break and Poster Session 1**

Symposium 5: Corrosion Processes at the Nanoscale

Room : Constitucion

Chaired by: Mary Ryan and Aurora Veloz

10:50 to 11:10 **Invited**

Mario Ferreira (Department of Materials and Ceramic Engineering, University of Aveiro, Aveiro, Portugal), Mikhail Zheludkevich, Joao Tedim

Active Protection Coatings with Inhibitor- Filled Nanocontainers

11:10 to 11:30

Alessandro Zana (Department of Chemistry, University of Copenhagen, Copenhagen, Denmark)

PEMFC Catalyst Degradation at the Nanoscale: New Insights About the Role of the Carbon Support on the Stability of Pt/C

11:30 **Coffee Break and Poster Session 1**

Symposium 6: Conducting Polymers, Inorganic Materials and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Pawel Kulesza

10:50 to 11:30 **Keynote**

Jürgen Heinze (Faculty of Chemistry, University of Freiburg, Institute for Physical Chemistry, Freiburg, Germany)

Conducting Polymers - Molecular Systems or Solid State Materials ? -

11:30 **Coffee Break and Poster Session 1**

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Room : Salon 304

Chaired by: Giovanni Zangari

10:50 to 11:30 **Keynote**

Hariklia (Lili) Deligianni (Department of Physical Sciences, IBM Research, Thomas J. Watson Research Center, Yorktown Heights, USA)

Synthesis by Electrodeposition and Annealing of Thin Film Solar Cells

11:30 **Coffee Break and Poster Session 1**

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Francois Lapicque

10:50 to 11:10
Aicheng Chen (Department of Chemistry, Lakehead University, Thunder Bay, Canada), Min Tian, Rasha Tolba, Ke Pan, Sapanbir Thind

Electrochemical Modification and Degradation of Lignin

11:10 to 11:30
Juan M. Peralta Hernández (Department of Environmental, CIATEC, Leon, Mexico)

Coupled electrocoagulation-electro Fenton/BDD process for tannery effluents treatment

11:30 **Coffee Break and Poster Session 1**

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis and Electrocatalysis

Room : Salon 303

Chaired by: Jiri Ludvik

10:50 to 11:30 **Keynote**
Armando Pombeiro (Centro Química Estrutural, Complexo I, Instituto Superior Tecnico, Lisboa, Portugal), M. Fatima Guedes da Silva, Maxim Kuznetsov, Elisabete Alegria, Luísa Martins

Combined Electrochemical and Theoretical Studies on ET-induced Reactions of Coordination Compounds

11:30 **Coffee Break and Poster Session 1**

Symposium 14: General Session

Room : Salon 308

Chaired by: Yuri Pleskov

10:50 to 11:30 **Keynote**
Ernesto Calvo (INQUIMAE, Facultad de Ciencias Exactas y Naturales, Buenos Aires, Argentina), Nataliia Mozhzhukhina, Federico Williams, Lucila Mendezdeleo

Oxygen Electroreduction in Non-aqueous Electrolyte for Lithium Air Battery Cathodes

11:30 **Coffee Break and Poster Session 1**

Monday 9, September 2013 - Afternoon

Symposium 1: Environmental Electroanalysis

Room : Salon 306

Chaired by: Serge Cosnier

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

Alain Walcarius (Lab. Chim. Phys. Microbiol. Environ., CNRS, Université de Lorraine, Villers-les-Nancy, France)

Electrogenerated sol-gel films: interest for electrochemical sensing and bioelectrocatalysis

15:00 to 15:20

María José Martín de Vidales (Department of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain), Pablo Cañizares, Manuel A. Rodrigo, Javier Llanos, Cristina Sáez

Using sono and photo technologies to promote conductive-diamond electrochemical oxidation

15:20 to 15:40

Sébastien Delile (Department of XPL, CEA-DAM le Ripault, Monts, France), Thierry Maillou, Pascal Palmas, Virginie Lair, Michel Cassir

Optimization of the Electrochemical Reduction of Nitromethane for the Development of an Integrated Portable Sensor

15:40 to 16:00

Valberes Nascimento (Departmento de Química, Universidade Federal Rural de Pernambuco, Recife, Brazil), Raphael Nascimento, Thiago Selva, Williame Ribeiro, Mônica Belian, Lúcio Angnes

Flow-Injection Electrochemical Determination of Citric Acid Using a Cobalt(II)-Phthalocyanine Modified Carbon Paste Electrode

16:00 to 16:20

Jiri Barek (Department of Analytical Chemistry, Faculty of Science, Charles University in Pargue, Prague, Czech Republic), Hana Dejmkova, Andrea Hajkova, Jan Fischer, Karolina Peckova, Vlastimil Vyskocil, Jiri Zima

New Electrode Materials: Environmental Electroanalysis of Biologically Active Organic Compounds

16:20 to 16:40 Coffee Break

Chaired by: Alison Downard

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

Serge Cosnier (Département de Chimie Moléculaire UMR CNRS 5250, Grenoble University-CNRS, Grenoble, France)

Recent advances in the fabrication and transduction of biosensors

17:00 to 17:20

Gabriela Valdés-Ramirez (Dept. of NanoEngineering, University of California San Diego, San Diego, USA)

Wearable Electrochemical Sensors for Environmental and Health Care Monitoring

17:20 to 17:40

Christopher Brett (Departamento de Quimica, Universidade de Coimbra, Coimbra, Portugal), Ricardo Carvalho, M. Emilia Ghica, Carla Gouveia-Caridade

Nanomaterial-Modified Electrodes for Environmental Monitoring

17:40 to 18:00

Jerzy Radecki (Department of Biosensors, Institute of Animal Reproduction and Food Research of PAS, Olsztyn, Poland)

Electrochemical detection of avian influenza virus genotype using ssDNA probe modified gold electrode

18:00 to 18:20

Hanna Radecka (Laboratory of Bioelectroanalysis, Institute of Animal Reproduction and Food Research of PAS, Olsztyn, Poland)

Electrochemical immunosensors for detection of different type of viruses

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

Room : Salon 307

Chaired by: Stefano Freguia and Shelley Minteer

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

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

Nonenzymatic Redox Cycling for Ultrasensitive Electrochemical Immunosensors

14:40 to 15:00

Evelin Gutiérrez Moreno (Área Académica de Química, Universidad Autónoma de Hidalgo, Pachuca de Soto, Mexico), Jose. A. Rodríguez, Leonor David, M. Luisa S. Silva

Impedimetric Sambucus nigra biosensor for recognition of cancer-associated sialyl-Tn antigen

15:00 to 15:20

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

Dendrimer-Encapsulated Gold Nanoparticles and Carbon Nanotube-Assisted Multiple Bienzymatic Labels Based Electrochemical Immunosensor

15:20 to 15:40

Magdalena Gebala (Department of Biochemistry, Stanford University, School of Medicine, Stanford, USA), Jakub Tymoczko, Anna Lauks, Daliborka Jambrec, Wolfgang Schuhmann

Self-assembly immobilization and hybridization of DNA onto gold electrodes induced by electric field modulations using potential pulse sequences

15:40 to 16:00

Anna Nowicka (Department of Chemistry, Warsaw, Poland), Agata Kowalczyk, Michal Fau, Marcin Karbarz, Mikolaj Donten, Zbigniew Stojek

Hydrogel with polymer chains grafted and functionalized with carboxyl groups as universal 3D platform for specific immobilization of DNA strands

16:00 to 16:10

Jannu Casanova-Moreno (Department of Chemistry, University of British Columbia, Vancouver, Canada), Dan Bizzotto

Probing for Heterogeneity in Electrically “Switchable” Layers used for DNA Sensing

16:10 to 16:20

Ross Milton (Department of Chemistry, FEPS, University of Surrey, Guildford, United Kingdom), Fabien Giroud, Alfred Thumser, Shelley Minteer, Robert Slade

The Effect of Oxygen Sensitivity/Insensitivity of Glucose-Oxidising Anodes on Oxygen-Reducing Enzymatic Cathodes in Enzymatic Biological Fuel Cells

16:20 to 16:40

Coffee Break

16:40 to 17:00

Renata Bilewicz (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Maciej Karaskiewicz, Dominika Lyp, Krzysztof Stolarczyk, Jerzy Rogalski

Wiring of Enzymes to Electrodes in Biological Fuel Cells

17:00 to 17:20

Roberto Ortiz (Department of Biochemistry and Structural Biology, Analytical Chemistry, Lund University, Lund, Sweden), Christopher Sigmund, Roland Ludwig, Lo Gorton

Direct Electron Transfer from the Dehydrogenase Domain of Cellobiose Dehydrogenase for Glucose oxidizing Low Potential Enzymatic Anode

17:20 to 17:40 **Invited**

Rupa Mukhopadhyay (Department of Biological Chemistry, IACS, Kolkata, India)

Tuning Solid-state Electron Transport in Ferritins at the Nanoscale

17:40 to 18:00

Federico Tasca (Department of Chemistry, Universidad de Santiago de Chile, Santiago, Chile)

Insights into the Molecular Mechanisms of Heterogeneous Electron Transfer between Multicopper Oxidases and Graphite Electrodes

18:00 to 18:20

Woonsup Shin (Department of Chemistry and Interdisciplinary Program, Sogang University, Seoul, Korea)

Non-gassing Electroosmotic Pump and Its Biomedical Applications

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Jaromir Pocedic and Francesca Soavi

14:20 to 14:40

Byungjin Choi (Samsung Advanced Institute of Technology, Samsung Electronics, Co. Ltd., Yongin-si, Korea), Jaegu Yoon, Jin-Hwan Park, Myunghoon Kim, Yoon-Sok Kang, Seok-Gwang Doo

Voltage Decay Performance at High Voltage Cycling in Cobalt Content Controlled Lithium and Manganese Rich Oxide

14:40 to 15:00

Holger Schneider (GCN/EB, BASF SE, Ludwigshafen, Germany), Klaus Leitner, Rüdiger Schmidt, Thomas Weiss, Oliver Gronwald, Yuriy Mikhaylik, Chariclea Scordilis-Kelley, Marina Safont, Mike Laramie

Challenges involved with high energy density lithium-sulfur batteries investigated at BASF SE and Sion Power

15:00 to 15:20

Sun-il Mho (Dept. of Chemistry, Energy Systems Research, Ajou University, Suwon, Korea), Jong-Moon Lee, Jeong-Jin Lee, In-Hyeong Yeo, Won Il Cho

Electrochemical Characteristics of $LiMn_2O_4$ Spinel @ SiO_2 Nanosphere Cathodes

15:20 to 15:40

Alberto Rosas-Aburto (Facultad de Química, Universidad Nacional Autónoma de México, México, Mexico), Pedro Roquero-Tejeda, Martín Hernández-Luna, Javier Revilla-Vázquez

Aging Studies and Polymer Structure Influence On Conductive Thermoplastic Elastomers for Batteries

15:40 to 16:00

Rutely Burgos-Castillo (Department of Electrochemistry, CIDETEQ, Queretaro, Mexico)

Analysis of electrochemical behavior and spin densities properties of a series of nitroxide radicals: Toward new electronic materials for energy storage devices

16:00 to 16:20

Seung-Tae Hong (Energy Systems Engineering, DGIST, Daegu, Korea)

Structural Studies of Electrochemical co-intercalation of Magnesium and Proton in Vanadium Pentoxide

16:20 to 16:40

Coffee Break

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

Piercarlo Mustarelli (Department of Chemistry, University of Pavia, Pavia, Italy)

Solid State NMR Spectroscopy: from *Ex situ* to *In situ* and *In operando* Applications to Lithium Batteries

17:00 to 17:20

Jordi Jacas Biendicho (Crystallography Group, ISIS Facility, Oxford, United Kingdom), Gunnar Svensson, Stephen Hull, Sten Eriksson, Dag Noreus

Novel *in-situ* neutron diffraction cell for battery materials

17:20 to 17:40

Kuniko Chihara (Institute of Materials Chemistry and Engineering, Kyushu University, 6-1, Kasuga Koen, Kasuga, Japan), Satoru Kuze, Takitaro Yamaguchi, Ayuko Kitajou, Shigeto Okada

Electrochemical Properties of Disodium Oxocarbon, $Na_2C_xO_x$ [x = 4, 5, and 6] for Sodium Secondary Battery

17:40 to 18:00

Philippe Fortgang (LEPMI, UMR 5631, Grenoble INP-CNRS-UJF, Saint-Martin-d'Hères, France), Christine Lefrou

Effects of Electrical Stress on Commercial $LiFePO_4$ Batteries in Multi-Cell Packs

18:00 to 18:20

Ryoung-Hee Kim (Energy Lab., SAIT, Samsung Electronics, Co. Ltd., Yongin-si, Korea), Won-Seok Chang, Hyun-Jin Kim, Ju-Sik Kim, Dong-Wook Han, Seok-Soo Lee

Electrochemical Properties of Vanadium Oxide prepared by Microwave-assisted Hydrothermal Synthesis for Rechargeable Magnesium Batteries

18:20 to 18:40

Shigeru Watariguchi (Department of Chemistry, Faculty of Science, Sinshu University, Matsumoto, Japan), Hidemaru Kakizaki, Takashi Kimoto, Teruo Hinoue

A New-Type Photovoltaic Cell Using Photochemical Reaction of Fullerene

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Hebe de las Mercedes Villullas

14:20 to 14:40

Jose Solla-Gullon (Institute of Electrochemistry, University of Alicante, Alicante, Spain), Roberto Martínez-Rodríguez, Francisco J. Vidal-Iglesias, Carlos R. Cabrera, Juan M. Feliu

Synthesis and Electrochemical Characterization of Adsorbate-Induced Preferential (100) Pt Nanoparticles Prepared in Water-in-Oil Microemulsion

14:40 to 15:00

Adalgisa De Andrade (Química, Universidade de São Paulo/FFCLRP, Ribeirão Preto, Brazil), Rafael M. Souza, Livia M. Palma, Thiago Almeida

Binary PtSn/C and PtRu/C alloys prepared by the microwave method towards ethanol electro-oxidation in alkaline media

15:00 to 15:20

Weiqi Zhang (Department of Materials Science and Technology, Nagaoka University of Technology, Niigata, Japan), Tsukasa Sakai, Sayoko Shironita, Minoru Umeda

Investigation of MOR and ORR selectivity at Pt/C electrocatalysts in the coexistence of methanol and oxygen

15:20 to 15:40

Tanja Kallio (Department of Chemistry, Aalto University, Aalto, Finland)

Using irreversible adsorbed adatoms to enhance the properties of PtC catalysts for DEFC applications

15:40 to 16:00

Rui Huang (Department of Chemistry, Xiamen University, Xiamen, China), Long Huang, Yuan-Rong Cai, Sheng-Pei Chen, Shi-Gang Sun

Bi-modified Carbon Supported Pt Nanocatalyst with High-density of Step Atoms and Their Properties for Oxidation of Formic Acid

16:00 to 16:20

Yi Liu (Department of Chemistry and Chemical Biology, Harvard University, Cambridge, USA), Daniel Nocera

Cobalt-based Thin Film Electrocatalyst towards Potential Biofuel Oxidation

16:20 to 16:40

Coffee Break

Chaired by: Xochitl Dominguez-Benetton

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

R. Juergen Behm (Department of Surface Chemistry and Catalysis, Ulm University, Ulm, Germany)

The Electrooxidation of C2 and C3 Alcohols at Pt – New Insights to an Old Problem

17:20 to 17:40

Iwona A. Rutkowska (Department of Chemistry, University of Warsaw, Warsaw, Poland), Anna Wadas, Diana Marks, Karolina Klak, Sylwia Zoladek, Pawel J. Kulesza

Activation of Dispersed Pt and PtRu Nanoparticles towards Oxidation of Alcohols through modification with WO_3 nanostructures admixed with TiO_2 or ZrO_2

17:40 to 18:00

Hebe de las Mercedes Villullas (Instituto de Química, UNESP, Araraquara, Brazil), Denis R.M. Godoi

Ethanol Oxidation on PtSn Nanocatalysts of Different Composition in Acidic and Alkaline Media

18:00 to 18:20

Klaus Wippermann (Institute of Energy and Climate Research, IEK3, Forschungszentrum Jülich GmbH, Jülich, Germany), Andreas Löhmer, Carsten Korte, Martin Müller, Detlef Stolten

Impedance study of complete methanol depletion in Direct Methanol Fuel Cells

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Salon 301

Chaired by: Carlos Cabrera

14:20 to 14:40

Victoria Flexer (Advanced Water Management Centre, University of Queensland, Brisbane, Australia), Marina Marque, Bogdan Donose, Bernardino Virdis, Jurg Keller

The Effect of Plasma Treatment of Electrodes on the Development of Electrochemically Active Biofilms

14:40 to 15:00

Monica Galicia (Chemical Biological Sciences-Biomedical Sciences Institute, Autonomous University of Ciudad Juarez, Juarez, Mexico), Homero Castaneda

Electrochemical Characterization of Glassy Carbon Electrode Scaffold Modification with Chitosan/Single Walled and Chitosan/Multi Walled Carbon Nanotube under Flow Regime Influence

15:00 to 15:20

Shen-Ming Chen (Department of Chemical Engineering and Biotechnology, National Taipei University of Technology, Taipei, Taiwan), Balamurugan Devadas, Veerappan Mani, Selvakumar Palanisamy

Synthesis and characterization of carbon based composite materials and their application in the construction of enzymatic biofuel cells

15:20 to 15:40

Christopher Schulz (Biochemistry and Structural Biology, Lund University, Lund, Sweden), Roland Ludwig, Lo Gorton

Influence of Metal Cations and the Polycation Polyethylenimine on the Electrochemistry of Cellobiose Dehydrogenase

15:40 to 16:00

Justo Lobato (Department of Chemical Engineering, Castilla-La Mancha, Ciudad Real, Spain), Manuel A. Rodrigo, Pablo Cañizares, Araceli González del Campo, Francisco J. Fernández

Bio-hydrogen Production and Energy Harvesting through a High Temperature PEMFC Stack with Composite PBI Based Membranes

16:00 to 16:20

Takuya Masuda (GREEN, National Institute for Materials Science (NIMS), Tsukuba, Japan), Yu Sun, Hitoshi Fukumitsu, Hiromitsu Uehara, Satoru Takakusagi, Wang-Jae Chun, Toshihiro Kondo, Kiyotaka Asakura, Kohei Uosaki

Photoelectrochemical CO_2 Reduction Reaction at Si(111) Electrodes Modified by Molecular Layers with Viologen Moiety and Various Metal Complexes

16:20 to 16:40

Coffee Break

Chaired by: Nicolas Alonso-Vante

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

Carlos Cabrera (Department of Chemistry, University of Puerto Rico, San Juan, Puerto Rico)

Bioelectrochemistry of Urea for Ammonia Fuel Cell Applications

17:00 to 17:20 **Invited**

Donal Leech (Chemistry, National University of Ireland Galway, Galway, Ireland), Peter O'Conghaile, Sergey Shleev, Lo Gorton

Redox Complexes Coupled to Surfaces and Supports for Application to Enzymatic Biofuel Cells

17:20 to 17:40

Xochitl Dominguez-Benetton (Separation and Conversion Technologies, VITO - Flemish Institute for Technological Research, Mol, Belgium), Alain Bergel, Deepak Pant, Korneel Rabaey

The Reality Behind the Race for the Highest Current Density with Electrochemically-Active Biofilms

17:40 to 18:00
Maria Yakovleva (Analytical Chemistry/Biochemistry and Structural Biology, Lund University, Lund, Sweden)

Characterisation of mutant pyranose dehydrogenase – an excellent candidate for fabrication of bioanodes

18:00 to 18:20
Alanah Fitch (Department of Chemistry and Biochemistry, Loyola University Chicago, Chicago, USA), Jonathan Muscolino

Microbial Electron Transfer at Clay-Modified ITO Electrodes

18:20 to 18:40
Karolien Vanbroekhoven (Department of Separation and Conversion Technologies, VITO-Flemish Institute for Technological Research, Mol, Belgium), Mohita Sharma, Xochitl Dominguez-Benetton, Priyangshu M. Sarma, Deepak Pant

Bioelectrocatalyzed Reduction of Organic Acids by Sulfate Reducing Bacteria

Symposium 5: Corrosion Processes at the Nanoscale

Room : Constitucion

Chaired by: Scott Lillard and Maximo Pech-Canul

14:20 to 15:00 **Keynote**
Kevin Ogle (Physical Chemistry Surfaces, ENSCP Chimie-ParisTech, Paris, France), Sophie Lebouil, Polina Volovitch

The kinetics of selective dissolution: Application to Al-Cu-Mg-Fe intermetallics and their transformation into copper films

15:00 to 15:20
Niusha Shakibi Nia (LaSIE FRE CNRS 3474, Université de La Rochelle, La Rochelle, France), Aurélie Godon, Juan Creus, Xavier Feaugas, Catherine Savall

Relationships between microstructure and electrochemical reactivity of nanocrystalline nickel and nickel tungsten

15:20 to 15:40
Roger Newman (Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Canada), Adrian Vega

Surface Chemistry and Morphology of Nanoporous Metals Synthesized from AgAuPt Precursors

15:40 to 16:00
Arturo Estrada-Vargas (Departamento de Ingeniería Química, CUCEI, Universidad de Guadalajara, Guadalajara, Mexico), Maximiliano Barcena-Soto, Sergio Gómez-Salazar, N. Casillas

EIS Measurements on a Micropore Electrode and its Application in AC-SECM

16:00 to 16:20
Kang Shi (Department of Chemistry, Xiamen University, Xiamen, China)

A new electrochemical nano-machining technique based on the redox nano-film

16:20 to 16:40

Coffee Break

16:40 to 17:00
Manuela Petrova (Department Materials and Chemistry, Vrije Universiteit Brussel, Brussels, Belgium), Ana Alvarez-Pampliega, Tom Haufman, Tom Breugelmans, Thibault Muselle, Krista Van den Bergh, Joost De Strycker, Herman Terryn, Annick Hubin

The Influence of the Al Content on the Corrosion Behavior of Metal Coated Steel Substrates: An ORP-EIS Study

17:00 to 17:20
Tom Haufman (Department of Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Brussels, Belgium), Tom Breugelmans, Yves Van Ingelgem, Herman Terryn, Annick Hubin

Corrosion Induced Behaviour of Aluminium Oxides during the Self-assembly of Protecting Organic Monolayers from Ethanolic Solutions: An ORP EIS Study

17:20 to 17:40 **Oronzio and Niccolò De Nora Foundation Young Author Prize**

Quentin Van Overmeere (Institute of Mechanics, Materials and Civil Engineering, Université Catholique de Louvain, Louvain-la-Neuve, Belgium), Dimitri Mercier, Ronny Santoro, Joris Proost

Pore Initiation and Growth in Anodic Alumina: Looking from within the Electrolyte

17:40 to 18:00

Carlos Alberto González Rodríguez (División de Ingeniería Mecanica Electrónica, Universidad Politécnica del Valle de México, Tultitlan, Mexico), Carlos Alberto Camacho Olguín, Héctor Cruz Mejía, Cristian Galvan Reyes

Effect of grain size on sensitization of 304 stainless steel

18:00 to 18:20

Kyoo Young Kim (Graduate Institute of Ferrous Technology, Pohang University of Science and Technology, Pohang, Korea), Jin Ho Park, Hyung Suk Seo

Innovative Alloy Design to Prevent Intergranular Corrosion of Ferritic Stainless Steel according to New Intergranular Corrosion Mechanism

Symposium 6 : Conducting Polymers, Inorganic Materials and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Pawel J. Kulesza and Gerko Oskam

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

Germano Tremiliosi-Filho (Department of Physical Chemistry, Instituto de Quimica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos, Brazil), Liliane Cristina Barttirola, Jose Fabian Schneider, Iris Torriani, Ubirajara Pereira Rodrigues-Filho

Improvement of Direct Ethanol Fuel Cell Performance: The Use of doped-Nafion® 117 Membranes with Pt and Pt-Ru Nanoparticles

15:00 to 15:20

Julio Calva (Instituto de Energias Renovables, Universidad Nacional Autonoma de Mexico, Temixco, Mexico)

Surface potential measurements to guide the selection of CNT-TiO_2 matrices in photoelectrochemical cells

15:20 to 15:40

Felipe Caballero-Briones (Laboratorio de Materiales Fotovoltaicos, Instituto Politecnico Nacional-CICATA Altamira, Altamira, Mexico), Nereyda Martinez, Sergio Jimenez-Sandoval, Fabio Felipe Chalé-Lara, Fausto Sanz

Dithiol-capped CdSe nanoparticle films prepared by a soft chemistry method

15:40 to 16:00

Cristian M. Diaz-Acosta (Department of Science, Centro De Inv Y Des Tecnologico en Electroquimica Sc, Pedro Escobedo, Sanfandila, Mexico), Alan R. Calzada-Hernandez, Selene Sepulveda

Well-shaped TiO_2 nanotubes films obtained by anodizing of low-purity Ti foils immersed in an HF-free aqueous medium for constructing Grätzel's type solar cells

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

Iván Mora-Seró (Physics, University Jaume I, Castelló de la Plana, Spain)

PbS for Near-IR Light Absorption in Photovoltaic and Solar Fuel Applications

16:20 to 16:40

Coffee Break

Chaired by: Germano Tremiliosi-Filho

16:40 to 17:00

Federico Bella (Department of Applied Science and Technology, Politecnico di Torino, Torino, Italy), Stefano Bianco, Claudio Gerbaldi, Diego Pugliese, Adriano Sacco, Annalisa Chiappone, Jijeesh Ravi Nair, Claudia Barolo, Arul Manuel Stephan, Roberta Bongiovanni

Photoelectrochemical Characterization of UV-Crosslinked Polymer Electrolytes with Non-Conventional Additives: Towards Efficient and Durable Quasi-Solid DSSCs

17:00 to 17:20

Gerko Oskam (Department of Applied Physics, Cinvestav, Mérida, Mexico), J.P. González-Vázquez, Juan A. Anta

Recombination in the Dye-Sensitized Solar Cell: A Random Walk Numerical Simulation Approach

17:20 to 17:40

Ramona Gutkowski (Analytische Chemie, Elektroanalytik & Sensorik, Ruhr Universität Bochum, Bochum, Germany), Kirill Sloizberg, Dominik Schäfer, Wolfgang Schuhmann

Electrochemical induced deposition of semiconductor films at Pt-nanoparticles for photoelectrocatalytic energy conversion

17:40 to 18:00

Perla F. Mendez (Department of Science, Centro De Inv Y Des Tecnologico En Electroquimica Sc, Pedro Escobedo, Sanfandila, Mexico), Nicte J. Perez-Viramontes, Luis A. Godínez Mora-Tovar

Reduced iodide diffusion by NH_2-terminated PAMAM dendrimers covalently adsorbed in nanoparticulated TiO_2 films used as photoanodes for constructing dye-sensitized solar cells

18:00 to 18:20

Tarmo Tamm (Institute of Technology, University of Tartu, Tartu, Estonia), Rauno Temmer

Soft self-contained conducting polymer composites for electro-chemo-mechanical applications

18:20 to 18:40

Giovanni Zangari (Department of Materials Science and Engineering, University of Virginia, Charlottesville, USA), Lok-kun Tsui

Plasma-treated TiO_2 nanotubes modified by Cu_2O and Fe_2O_3 and their photoelectrochemical performance

Room : Salon 302

Chaired by: Bernardo Frontana-Uribe and Marina Rincón-González

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

Shelley Minteer (Department of Chemistry, University of Utah, Salt Lake City, USA), Fabien Giroud, Matthew Meredith

Biohybrid Materials Design for Bioanodes

15:00 to 15:20

Zbigniew Stojek (Department of Chemistry, University of Warsaw, Warsaw, Poland), Anna Nowicka, Agata Kowalczyk, Mikolaj Donten

Iron-Magnetic Nanoparticles for Directing and Enhancing Transport and for Electrocatalysis

15:20 to 15:40

Benny Wouters (Research Group Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Brussels, Belgium), Xia Sheng, Tom Breugelmans, Ivo Vankelecom, Paolo Pescarmona, Annick Hubin

Carbon nanotube supported Pt and Cu nanoparticles as electrocatalysts for the nitrobenzene reduction in ethanol

15:40 to 16:00

Francesco Di Franco (Electrochemical Material Science Laboratory-DICAM, Università di Palermo, Palermo, Italy), Monica Santamaria, Gaetano Randazzo, Roberto Macaluso, Mauro Mosca, Claudio Calì

Electrochemical fabrication of amorphous TiO_2/Poly-3,4 Ethylenedioxythiophene (PEDOT) hybrid structures for electronic devices

16:00 to 16:20

Krzysztof Noworyta (Department II, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Wlodzimierz Kutner, Channa A. Wijesinghe, Francis D'Souza

Electrochemical and Piezomicrogravimetric Detection of Selected Alkaloids using a Zinc Porphyrin Polymer with Controlled Porosity

16:20 to 16:40

Coffee Break

16:40 to 17:00

Michal Wagner (Laboratory of Analytical Chemistry, Abo Akademi University, Turku, Finland), Carita Kvarnstrom, Ari Ivaska, Johan Bobacka

Electrochemical Properties of Novel Porous Carbon Based Material Synthesized from Polycyclic Aromatic Hydrocarbons

17:00 to 17:20

Lo Gorton (Dept. of Analytical Chemistry/Biochemistry, Lund University, Lund, Sweden), Kamrul Hasan, Hassan Hamidi, Sinan Cem Emek, Yusuf Dilgin, Donal Leech, Hans Erik Akerlund, Per Ake Albertsson

Electrochemical Communication between Thylakoid Membranes and Osmium Redox Polymers Modified Electrodes

17:20 to 17:40

Laurent Ruhlmann (Department of Chemistry, Université de Strasbourg, Strasbourg, France)

Fabrication of novel polyoxometalate-porphyrin copolymers: Photocatalytic activity and photoelectrochemical energy conversion

17:40 to 18:00

Carlos Campos (Department of Materials, ESIQIE-IPN, UPIBI-IPN, Mexico DF, Mexico), Miguel Oliver, Roberto Vargas, Alejandra Verdejo, Sarahi Pacheco

Capacitance of Electric Double-Layer of Support Materials to Prepare Better Catalysts

18:00 to 18:20

Araceli Hernandez (Department of CIICAp, Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico), José Escorcia, Rodolfo Cruz-Silva, Selene Sepulveda, Felipe Castillón, Jorge Uruchurtu, Carmina Menchaca

Development and Characterization of Titanium Dioxide Electrodes by Spin-Coating for Photovoltaic Application on Titanium Substrate

18:20 to 18:40

Fábio Simões (Department of Exact and Natural Sciences, Federal Universtity of São Paulo, Diadema, Brazil), Tiago Rosa, Luanna Parreira, Lucia Codognoto, Mauro Santos

Comparative electrochemical study of PANI/PSS and PANI-5%MWNT/PSS films obtained by layer-by-Layer (LBL) deposition onto ITO substrates

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Room : Salon 304

Chaired by: Kurt Hebert

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

Achille De Battisti (Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara, Italy)

Mechanisms of the Chlorine Evolution Reaction: State-of the-Art and Some New Results

15:00 to 15:20

Sandro Cattarin (Institute for Energetics and Interphases (IENI), Consiglio Nazionale delle Ricerche (CNR), Padova, Italy), Luca Mattarozzi, Nicola Comisso, Paolo Guerriero, Marco Musiani, Lourdes Vázquez-Gómez, Enrico Verlato

Electrodeposition of CuNi Alloy Electrodes and their Use for the Reduction of Nitrate Ions in Alkali

15:20 to 15:40

Lorenzo Perini (Chemical Science, University of Padua, Padua, Italy), Christian Durante, Silvia Leonardi, Oliver Schneider, Julia Kunze, Marco Favaro, Gaetano Granozzi, Armando Gennaro

Synthesis of Nitrogen Doped Mesoporous Carbon Supported Catalyst with Metal Nanoparticles for the Oxygen Reduction Reaction

15:40 to 16:00

Davide Rosestolato (Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara, Italy), Walter Wakem Fankem, Sergio Ferro, Giancarlo Battaglin, Pietro Riello, Alvise Benedetti, Achille De Battisti

Microstructural and Electrochemical Properties of Films Based on Iridium Oxide Stabilized with Titanium Oxide

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

David Cook (School of Chemistry, University of Southampton, Southampton, United Kingdom), Philip Bartlett, David Smith, Mike George, Jie Ke, Wenjian Zhang, Gillian Reid, William Levason, Andrew Hector, Jeremy Sloan, Richard Beanland

Supercritical Fluid Electrodeposition: Challenges and Potential Applications in Nanotechnology

16:20 to 16:40

Coffee Break

Chaired by: Manuel Palomar-Pardavé and Giovanni Zangari

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

Sachiko Ono (Department of Applied Chemistry, Kogakuin University, Tokyo, Japan), Shunsuke Kotaka, Kosuke Sugawara, Hidetaka Asoh

Self-Ordered Porous Anodic Oxide Film on GaAs

17:00 to 17:20

Frédéric Blaffart (Institute of Mechanics, Materials and Civil Engineering, Université Catholique de Louvain, Louvain-la-Neuve, Belgium), Joris Proost

On the Transition from Dense to Porous Anodic Silica

17:20 to 17:40

Kurt Hebert (Department of Chemical and Biological Engineering, Iowa State University, Ames, USA), Omer Capraz, Pranav Shrotriya

In Situ Stress Measurements During Formation of Self-Organized Porous Anodic Alumina

17:40 to 18:00

Andrei Ionut Mardare (Institute for Chemical Technology of Inorganic Materials, Johannes Kepler University, Linz, Austria), Alfred Ludwig, Alan Savan, Andreas Dirk Wieck, Achim Walter Hassel

High throughput growth and characterization of anodic oxides on Hf-based thin film combinatorial libraries

18:00 to 18:20
Alexander Kuhn (ENSCBP, University Bordeaux, Pessac, France), Matthias Heim, Hélène Lalo, Yémima Bon-Saint-Côme, Stéphane Reculusa, Serge Ravaine

Development of porous electrodes with an advanced functional design

18:20 to 18:40
Frank Uwe Renner (Department of Interface Chemistry and Surface Engineering, MPI Eisenforschung GmbH, Dusseldorf, Germany)

Control of the surface morphology of nanoporous gold

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Mercedes Teresita Oropeza Guzmán and Manuel Andres Rodrigo

14:20 to 14:40 **Invited**
Annick Hubin (Department of Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Brussels, Belgium), Benny Wouters, Bart Geboes, Marnix Depauw, Patrick Steegstra, Tom Breugelmans, Johan Deconinck

Electrochemical Cogeneration: A Sustainable Production Technology?

14:40 to 15:00
Francois Lapicque (CNRS - Université de Lorraine, Nancy, France), Sadjia Khelifi, Lokmane Abdelouahed, Denis Funfschilling, Souhila Poncin, Huai-Zhi Li

Chemical engineering issues in an alternative process for CO_2-free iron deposition

15:00 to 15:20
Alejandro Medel (Department of Electrochemistry, Centro de Investigación y Desarrollo Tecnológico en Electro, Pedro Escobedo, Mexico), Ignasi Sirés, Abdoulaye Thiam, Enric Brillas

The Role of Counter Electrode on the Production of Hydroxyl Radicals

15:20 to 15:40
Maria Valnice Boldrin Zanoni (Department of Analytical Chemistry, UNESP, Araraquara, Brazil), Juliana Brito, Lucio Almeida

Photoelectrocatalytic Conversion of Carbon Dioxide to Methanol on Photocathode Cu/Cu_2O

15:40 to 16:20 **Tajima Prize**
Jaeyoung Lee (Ertl Center for Electrochemistry and Catalysis, GIST, Gwangju, Korea), Beomgyun Jeong, Dongyoon Shin

Fe-Metal alloy onto nanostructured carbon for oxygen electrocatalysis

16:20 to 16:40 Coffee Break

16:40 to 17:00
Aldo Gago (Institute of Technical Thermodynamics, German Aerospace Center, Stuttgart, Germany)

Titanium coatings deposited by thermal spraying for bipolar plates of PEM electrolyzers

17:00 to 17:20
Francisco Jesus Fernandez Morales (Department of Chemical Engineering, University Castilla-La Mancha, Ciudad Real, Spain), Araceli Gonzalez del Campo, Pablo Cañizares, Justo Lobato, Manuel Andres Rodrigo

Power Response of a Micro-Scale Microbial Fuel Cell for Transient Activation-Deactivations

17:20 to 17:40
Yolanda Alvarez-Gallego (Business Unit Separation and Conversion Technology, Flemish Institute for Technological Research (VITO), Mol, Belgium), Ekin Dalak, Xochitl Dominguez-Benetton

Fuel Cells Revisited as Chemical Production Technology

17:40 to 18:00
Carmen Jimenez-Borja (Department of Chemical Engineering, University of Castilla La Mancha, Ciudad Real, Spain), Beatriz Delgado, Fernando Dorado, Jose Luis Valverde

Kinetic modeling of the electrochemically promoted CH4 oxidation over Pd catalyst-electrodes

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis and Electrocatalysis

Room : Salon 303

Chaired by: Francesco Paolucci and Armando Pombeiro

14:20 to 14:40

Stefan Kurek (Physical Chemistry Group, Cracow University of Technology, Krakow, Poland), Grzegorz Rotko, Piotr Romanczyk

Quantity Transformed into Quality. Unexpected Effects of Increasing Number of Bromine Atoms in Alicyclic and Aromatic Molecules on Electrochemical Behaviour

14:40 to 15:00

Vanessa Ramirez (Department of Electrochemistry, CIDETEQ, Pedro Escobedo, Mexico), Juan Carlos Garcia Ramos, Lena Ruiz-Azuara, Gabriel Trejo Córdoba

Effect of the facultative character of the ligand 1,8-bis-(2-pyridyl)-3,6-dithiaoctane (pdto) in the electrochemical response of Ni(II) complexes

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

Conor Hogan (Department of Chemistry, La Trobe Institute for Molecular Science, La Trobe University, Australia), Sarah Laird, Peter Barnard

Unusual pH Dependent Photophysical, Electrochemical and Electrochemiluminescent Behaviour of 1,2,4-triazole-based Iridium Complexes

15:20 to 15:40

Jiri Ludvik (Department of Molecular Electrochemistry, J. Heyrovský Institute of Physical Chemistry, Prague 8, Czech Republic), Alan Liska, Jiri Klima

Poly-radical Intermediates in Electrochemical Reduction of Polynitrocalix[4]arenes

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

Héctor Fernández (Department of Química, Universidad Nacional de Río Cuarto, Río Cuarto, Argentina)

Electrochemical methods applied on some organic compounds related to agroalimentary and health systems

16:00 to 16:20

Georgina Armendariz-Vidales (Department of Electrochemistry, CIDETEQ, SC, Pedro Escobedo, Mexico), Carlos Frontana

Molecular structure as determining factor of the rate of electron transfer for quinonoid molecules

16:20 to 16:40

Coffee Break

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

Marilia Goulart (Instituto de Química e Biotecnologia, Universidade Federal de Alagoas, MACEIO, Brazil), Francisco de Assis Silva, Leonardo da Silva, Yen Paiva

Electroactive Natural Phenols-based Polymers Applied as Redox Mediators for the Analysis of Antioxidants

17:20 to 17:40

James Y. Becker (Department of Chemistry, Ben-Gurion University of the Negev, Beer Sheva, Israel), Tatiana Golub

Electrochemical Oxidation of Amides of Type $Ph_2CHCONHAr$

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

Toshio Fuchigami (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Shinsuke Inagi

Electrochemical Fuorination Using Halogen Mediators in Ionic Liquid Hydrogen Fluoride Salt

18:00 to 18:20

Seung Joon Yoo (Department of Chemistry and Biochemistry, University of California, Santa Barbara, Santa Barbara, USA), R. Daniel Little

'Polymeric Ionic Liquid/Carbon Black' Composite as a Green Supporting Electrolyte

18:20 to 18:40

Carlos M. Sanchez-Sanchez (Instituto Universitario de Electroquimica, University of Alicante, Alicante, Spain), Christian Durante, Armando Gennaro, Vicente Montiel

Electrocatalysts for the Carbon-Halogen Bond Reduction Screened by Scanning Electrochemical Microscopy

Symposium 14: General Session

Room : Salon 308

Chaired by: Ernesto Calvo

14:20 to 14:40

Yuri Pleskov (Department of Physical Electrochemistry, Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow, Russia), Marina Krotova, Valentin Varnin, Irina Teremetskaya

The Effect of CVD-Diamond Film Thickness on the Electrochemical Properties of Synthetic Diamond Thin-film Electrodes

14:40 to 15:00

Michael O'Connell (Materials Division, National Physical Laboratory, London, United Kingdom), Andrew Wain

Probing electrocatalysis at nanostructured surfaces using combined scanning electrochemical –scanning ion conductance microscopy (SECM-SICM)

15:00 to 15:20

Jelena Stojadinovic (Department of Chemistry and Biochemistry, Ruhr University, Bochum, Germany), Fabio La Mantia

Electrochemical Properties of Composite Gas Separators for Zero Gap Alkaline Electrolyzers

15:20 to 15:40

Elo Kibena (Institute of Chemistry, University of Tartu, Tartu, Estonia), Margus Marandi, Uno Mäeorg, Leonard Matisen, Aarne Kasikov, Väino Sammelselg, Luna B. Venarusso, Gilberto Maia, Kaido Tammeveski

Electrochemical and Spectroscopic Studies of Gold Electrodes Modified with Azobenzene Diazonium Salts

15:40 to 16:00

Leigh Aldous (School of Chemistry, University of New South Wales, Sydney, Australia), Therese Hadjia, Elham Hosseini Bab Anari

Correlating the electrochemical and thermal stability of ionic liquids in contact with (electro)catalytic substrates

16:00 to 16:20

Ana Sofia Varela (Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark), Christian G. Schlaup, Zarko P. Jovanov, Paolo Malacrida, Sebastian Horch, Ifan Stephens, Ib Chorkendorff

CO_2 electroreduction on well-defined bimetallic surfaces: Cu overlayers on Pt single crystals

16:20 to 16:40

Coffee Break

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

Bing-Wei Mao (Chemistry Department, Xiamen University, Xiamen, China), Ji-Jun Li, Zhao-Bin Chen, Jing-Hong Liang, Xiao-Shun Zhou, Xu-Fen Xie, Li-Qiang Xie, Jia-Wei Yan

What Can Electrochemical Scanning Tunneling Microscopy Do for Molecular Electronics and Spintronics?

17:20 to 17:40

Carl-Albrecht Schiller (R&D, Zahner-elektrik, Kronach, Germany), Patrik Schmuki, Christian Böhmer, Franz Richter

Investigating the Dynamics of Dye Sensitized Solar Cells - a New Transmission Line Model Approach Tailored for Nanotube- and Nanorod-Based Devices

17:40 to 18:00

Alison Downard (Department of Chemistry, University of Canterbury, Christchurch, New Zealand), Lita Lee, Paula Brooksby

A Covalently-Anchored Carboxyphenyl Monolayer via Aryldiazonium Ion Grafting: Preparation and On-Surface Chemistry

18:00 to 18:20

Kang Uk Lee (School of Chemical and Biological Engineering, Seoul National University, Seoul, Korea), Kyung Ju Park, Myung Ho Kim, Oh Joong Kwon

Research of B/W particles in electrophoretic display

Reaxys Presented by ELSEVIER

Room : Salon 301

18:40 to 19:40

Héctor Manuel Torres Domínguez, Chemical Engineering, Chemistry Faculty, Universidad Nacional Autónoma de México

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Tuesday 10 September 2013

ROOM	Auditorium	Hall C	Hall D	Salon 301	Salon 302	Salon 303	Salon 304	Salon 305	Salon 306	Salon 307	Salon 308	Constitución
08:30 -09:30	**Plenary Lecture** Richard McCreery											
	Symposium 4c	**Symposium 4b**	**Symposium 6**	**Symposium 4c**	**Symposium 4d**	**Symposium 11**	**Symposium 7**	**Symposium 8**	**Symposium 1**	**Symposium 3**	**Symposium 14**	**Symposium 5**
09:40 - 10:00	Qingfeng Li	L. Berlouis		E. Chainet	P. Balbuena	F. Maran	M. Ryan	L. A. Godínez	T. Kakiuchi	M. Sailor	I. Kiss	M. Santamaria
10:00 - 10:20				Na Tia	C. Delacourt			Minghua Zho	A. Rashid			C. Donner
10:20 - 10:40	F. Conti	M-A. Goulet		Bing Joe Hwang	Joungwon Park	C. Durante	G. Kissling	R. E. Palm	P. G L Baker	D. Fattakhova	F. Huguenin	F. Montemor
10:40	Coffee Break **Poster Session 2** : Symposium 5, 6, 7, 11, 13											
12:30	Lunch 13:10 - 14:10 Council Meeting: Room 301											
		Symposium 4c										
14:20 - 14:40	R. Hiesgen	L. Sanz	K. Rajeshwar	G. Taillades	E. Leiva	S. Bollo	J. Switzer	S. Ferro	A. Vojtech	A. Oliveira-Brett	M. Koper	L. F. P. Dick
14:40 - 15:00	A. Melchy	J Pocedic		M. Lo Faro	H. Mosqueda	M. Oyama		S. Garcia-S.				A. W. Hassel
15:00 - 15:20	S. Shanmugam	S. Mallinson	Wei-nien Su	J. Schefold	J. Vazquez-A.	Chang-Deng Xu	T. Azib	R. Salazar	Hasuck Kim	A. Vakurov	R. Nazmutdinov	V. L. Martins
15:20 - 15:40	Jianguo Liu	A. A. Franco	P. J. Kulesz	N. Kremliakova	Junhee Kang	K. Takamura	G. Stafford	M. Cerro-Lopez	L. L. C. Oriundo	O. Buriez	A. Gewirth	D. Ruiz
15:40 - 16:00	Jinsu Ha	C. Ulbricht	Y. Tateyam	P. Padmadas	M-L. Doublet	M. Velazquez	A. Morrin	E. Brillas	S. Daniele	V. Hernandez	N. Garcia-A.	Sungmo Moon
16:00 - 16:20	A. Stassi	S. Obeidi	P. Acevedo-P.	Yingchao Yu		P. Peljo	Yongliang Zhou		E. Rozniecka	E. Suprun	E. Herrero	Hong Pyo Kim
16:20 - 16:40	Coffee Break											
16:40 - 17:00	E. Kjeang	S. Bodoard	D. Mandler	Kenichiro Ota	P. Kaghazchi	F. J. González	Shi-Gang Sun	C. A. Martinez	I. Robles	F. Lisdat	A. Gross	M. Musiani
17:00 - 17:20	K. A. Friedrich	Hochun Lee		Fengzhan Si	M Eikerling		Yan-Xia Jiang	R. Bertazzoli	T. Navratil	M. Ovalle		C. Cardona
17:20 - 17:40	Y. Sone	E. Nanini-M.	M. Busch	S. Shironita	M. Montes de O.	T. Kobayashi	R. A. Picca	C. Rodríguez		J. Artés V.	J. Rossmeisl	M.P. Chavez-D.
17:40 - 18:00	Ji-rae Kim	D. Nava	M. Rodríguez	Jeongsuk Seo	Ka Hung Wong	V. Jouikov		E. Mena		L. Gonzalez M.	T. Takamura	J. M. Ramírez
18:00 - 18:20	F. M. Cuevas	R. Kosteck	M. Zoontjes		Lin Zhuang	E. Martinez		S. Cotillas		J. Kupis	J.-S. Filhol	B. Gwinner
18:20 - 18:40	Shengnan Hua	SeungTae Lee				M. Isaacs				W. Kutner	M. Landstorfer	
18:40 - 20:00	Reception											

Tuesday, 10 September 2013 - Morning

Plenary Lecture

Room : Auditorium

Chaired by: Yunny Meas, Centro de Investigación y Desarrollo Tecnológico en Electroquímica-CIDETEQ, México

08:30 to 09:30

Richard McCreery (National Institute for Nanotechnology, University of Alberta, Edmonton, Canada), Haijun Yan, Adam Bergren, Nikola Pekas, Sayed Sayed, Bryan Szeto

A Merger of Electrochemistry and Molecular Electronics

Symposium 1: Environmental Electroanalysis

Room : Salon 306

Chaired by: Bernardo Frontana-Uribe and Margarita Stoytcheva

09:40 to 10:00

Takashi Kakiuchi (pH Science and Technology Laboratory, Ibarakishi, Osaka, Japan), Yasushi Moriyama, Kazuya Minami, Yuta Otsuka, Masahiro Yamamoto

Single ion activities in 2-1 and 1-2 electrolytes solutions determined potentiometrically by use of an ionic liquid salt bridge

10:00 to 10:20

Ashi Rashid (Department of Chemistry, University of Leeds, Leeds, United Kingdom), Alexander Vakurov, Richard Bingham, Andrew Nelson

Effect of Electrolyte on the Phase Transitions by Phospholipids on Hg

10:20 to 10:40

Priscilla G. L. Baker (Department of Chemistry, University of the Western Cape, Bellville, South Africa)

Electrochemical evaluation of hydrophilic polysulfone membrane material performance

10:40

Coffee Break and Poster Session 2

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

Room : Salon 307

Chaired by: Soledad Bollo and Alexander Kuhn

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

Michael Sailor (Department of Chemistry and Biochemistry, University of California, San Diego, La Jolla, USA), Manuel Orosco, Vinh Diep, Timothy Kelly, Michelle Chen

Designing Bioelectrochemical Interfaces in Mesoporous Silicon for Simultaneous Separation, Processing, and Detection of Biomolecules

10:20 to 10:40 **Invited**

Dina Fattakhova-Rohlfing (Department of Chemistry and Center for NanoScience (CeNS), University of Munich (LMU), Munich, Germany)

Porous Transparent Electrodes as Conducting Platforms for Incorporation of Redox Moieties

10:40

Coffee Break and Poster Session 2

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Piercarlo Mustarelli and John Owen

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

Len Berlouis (Department of Pure and Applied Chemistry, University of Strathclyde, Glasgow, United Kingdom), Georgios Nikiforidis, Rory Cartwright

Impact of charging current density on the performance of the Zn-Ce redox flow battery

10:20 to 10:40

Marc-Antoni Goulet (Department of Mechatronic Systems Engineering, Simon Fraser University, Surrey, Canada), Erik Kjeang

Microfluidic Redox Flow Battery: Device Layout and Operation

10:40

Coffee Break and Poster Session 2

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Deborah Jones and Jacques Roziere

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

Qingfeng Li (Department of Energy Conversion and Storage, Technical University of Denmark, Lyngby, Denmark), David Aili, Jens Oluf Jensen, Robert F. Savinell, Lars N. Cleemann, Niels J. Bjerrum

Acid Doped Polymer Membranes as an Approach to High Temperature Proton Exchange Membrane Fuel Cells: Successes and Peculiarities

10:20 to 10:40

Fosca Conti (Institute of Energy and Climate Research (IEK), Research Center Juelich, Juelich, Germany), Anne Majerus, Sabine Willbold, Werner Lehnert, Carsten Korte

Spectroscopic Investigation of the Acid and Water Uptake of Polybenzimidazole Membranes for Fuel Cells

Room : Salon 301

Chaired by: Bing Joe Hwang and Sebastian Pathiyamattom

09:40 to 10:00

Eric Chainet (LEPMI, Grenoble-INP, Saint Martin d'Hères, France), Lenka Svecova, Mohamed Diawara, Pierre-Xavier Thivel, Richard Laucournet

Preliminary study of platinum recycling from membrane-electrodes assemblies of PEM fuel cells

10:00 to 10:20

Na Tian (Department of Chemistry, Xiamen University, Xiamen, China), Yu-Jia Deng, Jing Xiao, Hai-Xia Liu, Zhi-You Zhou, Shi-Gang Sun

Pt-group nanocrystals with high-index facets as high performance electrocatalysts

10:20 to 10:40

Bing Joe Hwang (Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Chun-Jern Pan, Sin-Bei Chen, Wei-nien Su, Ming-Yao Cheng, Ju-Hsiang Cheng, John Rick, Jyh-Fu Lee

Synthesis and Stabilization of Intermetallic PtM Nanocatalyts with High Activity Towards Oxygen Reduction

10:40

Coffee Break and Poster Session 2

Symposium 4d: Novel Materials and Devices for Energy Storage and Conversion: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Salon 302

Chaired by: Alejandro A. Franco and Kourosh Malek

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

Perla Balbuena (Department of Chemical Engineering, Texas A&M University, College Station, USA), Julibeth Martinez de la Hoz, Yuguang Ma, Laura Espinoza, Jorge Seminario

SEI layer formation on Si anodes of Li-ion batteries

10:00 to 10:20 **Invited**

Charles Delacourt (Laboratoire de Réactivité et de Chimie des Solides, CNRS UMR 7314 - Université de Picardie Jules Verne, Amiens, France), Mohammad Hosein Safari

A Physics-Based Methodology for Life Prediction of Li-ion Batteries

10:20 to 10:40

Joungwon Park (Samsung Advanced Institute of Technology, Samsung Electronics, Co. Ltd, Yongin-si, Korea), Duk-Jin Oh, Myung-Jin Lee, Doo-Yeon Lee, Basab Roy, Seok-Gwang Doo

High solubility and electrochemical property of the asymmetric structured metal complex for non-aqueous redox flow battery

10:40

Coffee Break and Poster Session 2

TUESDAY AM

Symposium 5: Corrosion Processes at the Nanoscale

Room : Constitucion

Chaired by: José Luis Ramírez Reyes and Bernard Tribollet

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

Monica Santamaria (Electrochemical Material Science Laboratory-DICAM, Università di Palermo, Palermo, Italy), Salvatore Terracina, Francesco Di Quarto, Hiroki Habazaki

Effect of Thermal Treatment on the Physico-Chemical Properties of Porous Anodic Films on Iron

10:00 to 10:20

Constanze Donner (Central R&D Electrochemistry, ATOTECH Germany, Berlin, Germany)

Oscillatory passive active transition during pore corrosion in nickel chromium layer systems

10:20 to 10:40

Fatima Montemor (DEQ, Instituto Superior Tecnico, Lisboa, Portugal), Bruno Martins, Mariola Plawecka, Piotr Warszynski

"Smart" Water Based Epoxy Coatings for Corrosion Protection of Renewable Energy Production Structures Exposed to Marine Environments

10:40

Coffee Break and Poster Session 2

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Room : Salon 304

Chaired by: Giovanni Zangari

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

Mary Ryan (Department of Materials, Imperial College London, London, United Kingdom)

Electroprocessing of Magnetic Materials

10:20 to 10:40

Gabriela Kissling (Chemistry, University of Southampton, Southampton, United Kingdom), Andrew Jolleys, Ruomeng Huang, Philip Bartlett, C. H. (Kees) de Groot, Andrew Hector, William Levason, Gillian Reid

Electrodeposition of Ternary Alloys for Phase Change Random Access Memory Applications

10:40

Coffee Break and Poster Session 2

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Carlos Alberto Martinez-Huitle

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

Luis A. Godínez Mora-Tovar (Department of Direction, Centro de Investigación y Desarrollo Tecnológico en Electroq, Sanfandila, Mexico)

Some Electro-Fenton based approaches for the development water of treatment technologies

10:00 to 10:20 **Invited**

Minghua Zhou (College of Environmental Science and Engineering, Nankai University, Tianjin, China), Lei Zhou, Chao Zhang

Cathode Modification for Efficient Electro-Fenton Degradation of Biorefractory Organic Pollutant

10:20 to 10:40

Ricardo E. Palma (Grupo de Remediacíon Ambiental y Biocatalisis, Universidad de Antioquia, Medellin, Colombia), Ignacio González, Ricardo A. Torres

Electrochemical vs. Photochemical and Sonochemical Oxidations for the Elimination of Indigo Carmine in Water

10:40

Coffee Break and Poster Session 2

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis and Electrocatalysis

Room : Salon 303

Chaired by: Marilia Goulart

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

Flavio Maran (Department of Chemistry, University of Padova, Padova, Italy), Sabrina Antonello, Pierangelo Gobbo, Ivan Guryanov

Superefficient Electron Transfer through 3.10-Helical Peptides

10:20 to 10:40

Christian Durante (Department of Chemical Sciences, Università degli Studi di Padova, Padova, Italy), Lorenzo Perini, Marco Favaro, Stefano Agnoli, Gaetano Granozzi, Armando Gennaro

Electrocatalysis at Pd Nanoparticles: Effect of the Support Nitrogen Doping on the Catalytic Activation of Carbon-Halogen Bond

10:40

Coffee Break and Poster Session 2

Symposium 14: General Session

Room : Salon 308

Chaired by: Bing-Wei Mao

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

Istvan Kiss (Department of Chemistry, Saint Louis University, St Louis, USA), Yanxin Jia

Dynamics of Electrochemical Micro-oscillator Networks in On-Chip Integrated Flow Cells

10:20 to 10:40

Fritz Huguenin (Department of Chemistry, University de São Paulo, Ribeirão Preto, Brazil), Tiago Facci, Wellington Gomes, Diógenes Araújo

Ion Electroinsertion in Self-Assembled Materials for Energy Storage

10:40

Coffee Break and Poster Session 2

Tuesday, 10 September 2013 - Afternoon

Symposium 1: Environmental Electroanalysis

Room : Salon 306

Chaired by: Gabriela Valdés-Ramirez

14:20 to 15:00 **ISE Prize for Environmental Electrochemistry**

Adam Vojtech (Central European Institute of Technology, Brno University of Technology, Brno, Czech Republic)

Environmental Electro Metallomics

15:00 to 15:20

Hasuck Kim (Department of Energy Systems, DGIST, Daegu, Korea), Seunghee Woo, Yang-Rae Kim, Taek Dong Chung, Yuanzhe Piao

Use of graphene and graphene/MWCNT composites for electroanalytical applications

15:20 to 15:40

Lucy Linders Coria Oriundo (Department of Chemistry, Universidad Nacional de Ingeniería, Lima, Peru), Adolfo La Rosa Toro Gómez

Modified electrodes with chitosan and platinum particles for rapid determination of *Eschericha coli*

15:40 to 16:00

Salvatore Daniele (Department of Molecular Sciences and Nanosystems, University Cà Foscari Venice, Venice, Italy), Dario Battistel, Giulia Pecchielan

Study of Ag^+ ions Release from Silver Nanoparticles Used as Fillers in Food-Packaging Materials

16:00 to 16:20

Ewa Rozniecka (Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Martin Jonsson-Niedziolka, Anna Celebanska, Joanna Niedziolka-Jonsson, Marcin Opallo

Sensitive and Selective Electrochemical Detection of Dopamine in Flow System on Carbon Nanoparticulate Electrode

16:20 to 16:40

Coffee Break

16:40 to 17:20

Irma Robles (Cideteq, Subdirección de Investigación, Querétaro, Mexico), Erika Bustos, Luis A. Godínez Mora-Tovar, Francisco J. Rodríguez, Adrian Rodríguez, Juan Manríquez

Thermodynamic and Kinetic Study of Mercury (II) Adsorption on Ca-Bentonite using Anodic Stripping Voltammetry

17:20 to 17:40

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

Electrochemical Methods in Characterization of Transporting Processes of Charged Particles across the Phospholipid Membranes

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

Room : Salon 307

Chaired by: Miguel Velazquez-Manzanares and Maria Yakovleva

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

Ana Maria Oliveira-Brett (Departamento de Química, Universidade de Coimbra, Coimbra, Portugal), Teodor Adrian Enache, S. Carlos B. Oliveira

Protein Direct Electrochemical Oxidation

15:00 to 15:20

Alexander Vakurov (Department of Chemistry, The University of Leeds, Leeds, United Kingdom), Massimiliano Galluzzi, Alessandro Podesta, Simon Connell, Andrew Nelson

AFM study of fluid lipid assemblies in electric fields

15:20 to 15:40

Olivier Buriez (Department of Chemistry, Ecole Normale Supérieure, Paris, France), Pierluca Messina, Eric Labbe, François Huet, Kieu An Ngo, Vincent Vivier, Frédéric Lemaître, Christian Amatore

Interaction and Crossing of Redox Tagged Molecules with Supported or Suspended Pure Lipid Bilayers

15:40 to 16:00

Vianey-Aseret Hernandez-Ramirez (Departamento de Quimica Sede Pueblito de Rocha Campus Guanaj, Universidad de Guanajuato, Guanajuato, Mexico), Mathieu Lazerges, Alain Pailleret, Suzanne Joiret, Fanny d'Orlye, Hubert Perrot, Fethi Bedioui, Silvia Gutierrez-Granados, Luis Manuel De Leon-Rodriguez

Linear/Ring Self-Assembled Oligopeptide Nanostructures and Electroactive Biomaterial

16:00 to 16:20

Elena Suprun (Department of Personalized Medicine, Institute of Biomedical Chemistry, RAMS, Moscow, Russia), Tatiana Bulko, Maria Zharkova, Alexander Veselovsky, Victoria Shumyantseva, Alexander Archakov

Proteins as Electroactive Molecules: Applications in Medicine

16:20 to 16:40

Coffee Break

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

Fred Lisdat (Biosystems Technology, Technical University of Applied Sciences Wildau, Wildau, Germany), David Sarauli, Ivo Schubart, Vitali Scherbahn, Burkhard Schulz

Sulfonated Polyanillines as Interfaces for the Redox Enzyme PQQ-dependent Glucose Dehydrogenase

17:00 to 17:20

Marcela Ovalle (Department of Nanocatalysis, Centro de Nanociencias y Nanotecnologia - UNAM, Ensenada, Mexico), Eurydice Arroyo, Luis Enriquez, Amelia Olivas

A novel amperometric biosensor based on WO_3

17:20 to 17:40

Juan Manuel Artés Vivancos (Electrical and Computer Engineering Department, University of California Davis, Davis, USA), Montserrat López-Martínez, Ismael Díez-Pérez, Fausto Sanz, Pau Gorostiza

Electrochemical Properties of the Redox Protein Azurin at the Single Molecule Level

17:40 to 18:00

Laura Gonzalez Macia (Department of Applied Science, University of the West of England, Bristol, United Kingdom), Anthony J. Killard

A Printed Electrocatalyst for the Determination of H_2O_2 Formed via Enzymatic Reaction of Cholesterol

18:00 to 18:20

Justyna Kupis (Department of Analytical Chemistry, AGH-University of Science and Technology, Cracow, Poland), Michal Wagner, Filip Ciepiela, Johan Bobacka, Andrzej Lewenstam, Jan Migdalski

New Biomimetic Platform Base on Molecularly Imprinted Conducting Polymers

18:20 to 18:40

Wlodzimierz Kutner (Department of Physical Chemistry of Supramolecular Complexes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Tan-Phat Huynh, Marta Sosnowska, Chandra Bikram K.C., Vladimir Nesterov, Janusz W. Sobczak, Francis D'Souza

A General Protocol of Designing and Fabricating Thin Films of Conducting Molecularly Imprinted Polymers for Application to Selective Sensing

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Hector Abruna and Judith Cardoso

14:20 to 14:40

Laura Sanz (Department of Electrochemical Processes, Institute Imdea Energy, Móstoles (Madrid), Spain), Enrique García-Quismondo, Jesús Palma, Marc Anderson

Investigation and Optimization of Copper-Chloride Based Electrolytes for Redox Flow Battery Applications

14:40 to 15:00

Jaromir Pocedic (New Technologies - Research Centre (NTC), University of West Bohemia, Pilsen, Czech Republic), Petr Mazur, Jan Dundalek, Jiri Marsalek, Jozef Chmelar, Juraj Kosek

Air-electrodes with the catalyst prepared by the electrospraying method

15:00 to 15:20

Sarah Mallinson (Department of Chemistry, University of Surrey, Guildford, United Kingdom), Robert Slade

Redox Flow Battery Strategies: Tailoring Ion-Permeable Membranes

15:20 to 15:40

Alejandro A. Franco (Laboratoire de Réactivité et de Chimie des Solides (LRCS), Université de Picardie Jules Verne & CNRS (UMR 7314), Amiens, France)

Conversion reactions in lithium ion and lithium air batteries: From multiscale modeling to the electrodes rational design

15:40 to 16:00

Christoph Ulbricht (Department of Physical Chemistry, MEET, University of Muenster, Muenster, Germany), Dirk Leifert, Marc Wentker, Martin Winter, Alexandra Lex-Balducci

RAFT Block Copolymers – Towards Polymer Based Electrolytes for Lithium-Ion Battery Application

16:00 to 16:20

Shahmahmood Obeidi (Institute of Physical Chemistry, MEET, University of Muenster, Muenster, Germany), Jan Holtmann, Alexandra Lex-Balducci, Martin Winter

New Ceramic Separators for Li-ion Batteries

16:20 to 16:40

Coffee Break

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

Silvia Bodoardo (Department of Applied Science and Technology, Politecnico di Torino, Torino, Italy), Jijeesh Ravi Nair, Claudio Gerbaldi, Carlotta Francia, Giuseppina Meligrana, Nerino Penazzi, Francesca Di Lupo, Matteo Destro, Juqin Zeng, Simone Zanarini, Simone Casino, Luca Porcarelli, Julia Amici

Polymer Electrolytes for Safe Lithium-ion, Electrochromic and Photovoltaic Applications

17:00 to 17:20

Hochun Lee (Energy Systems Engineering, DGIST, Daegu, Korea), Dong-Hui Kim, Sunghoon Yu, Jongho Jeon, Jeong-Ju Cho, Doo-Kyung Yang

Gel polymer electrolyte enabling higher rate performance of lithium-ion batteries than liquid electrolyte

17:20 to 17:40

Elise Nanini-Maury (Department of LECIME, Chimie ParisTech, Paris, France), Jolanta Swiatowska, Alexandre Chagnes, Pierre Tran-Van, Armelle Ringuedé, Philippe Marcus, Michel Cassir

New Liquid Electrolyte as a Tool to Characterize High Potential Positive Electrodes for Lithium-ion Batteries

17:40 to 18:00

Dora Nava (Universidad Autónoma Metropolitana, Mexico, Mexico), Ignacio González, Pedro García, Juana Pacheco, Judith Cardoso

Zwitterionic chitosan containing ionic liquids and glycerol as biopolymer electrolyte for lithium batteries

18:00 to 18:20

Robert Kostecki (Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory, Berkeley, USA), Angelique Jarry, Simon Lux, Nicolas Norberg

Interfacial Phenomena at a $LiNi_{0.5}Mn_{1.5}O_4$ Electrode in Organic Carbonate Electrolytes

18:20 to 18:40

SeungTae Lee (Department of Energy, Corporate R&D Center, Samsung SDI, Yongin-si, Korea), Jung-yi Yu, Erang Cho, Inhaeng Cho, Sanghyun Eom, Woocheol Shin

Cyanoalkyl phosphate as a new additive in high voltage electrolytes for lithium-ion batteries (LIBs)

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: K. Andreas Friedrich

14:20 to 14:40

Renate Hiesgen (Faculty of Basic Science, University of Applied Sciences, Esslingen, Germany), Tobias Morawietz, Ines Galm, Stefan Helmly, K. Andreas Friedrich

Nanoscale Structure of Nafion® and Aquivion® Solid Electrolyte Membranes by Atomic Force Microscopy

14:40 to 15:00

Alix Melchy (Department of Chemistry, Simon Fraser University, Burnaby, Canada)

Physical theory of ionomer aggregation in water

15:00 to 15:20

Sangaraju Shanmugam (Department of Energy Systems Engineering, DGIST, Daegu, Korea), Kriangsak Ketpang, Akila Kumar Sahu

Hybrid Composite Electrolyte Membranes for Pemfc Operating at Elevated Temperature

15:20 to 15:40

Jianguo Liu (Department of Materials Science and Engineering, Nanjing University, Nanjing, China)

The degradation study of PTFE reinforced perfluorinated sulfonic acid ionomer in the operation of PEM fuel cell under accelerated stress tests

15:40 to 16:00

Jinsu Ha (Energy Conversion Group, Materials R&D Center, SAIT, Samsung Electronics, Yongin-si, Korea), Suk-Gi Hong, Joon-Hee Kim, Yoon H. Lee, Jung O. Park

Water Retaining Electrode Design for Low Humidified Mid-Temperature PEMFC

16:00 to 16:20

Alessandro Stassi (Istituto di Tecnologie Avanzate per l'Energia, CNR-ITAE, Messina, Italy), Irene Gatto, Giuseppe Monforte, Assunta Patti, Enza Passalacqua, Vincenzo Baglio, Antonino S. Aricò

A Study of Pd-based Electrocatalysts for Automotive Applications

16:20 to 16:40

Coffee Break

Chaired by: Renate Hiesgen

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

Erik Kjeang (School of Mechatronic Systems Engineering, Simon Fraser University, Surrey, Canada), Jin Wook Lee, Marc-Antoni Goulet

From Microfluidic to Nanofluidic Fuel Cells: Technology Development Driven by Fundamental Research

17:00 to 17:20

K. Andreas Friedrich (Institute of Technical Thermodynamics, German Aerospace Center, Stuttgart, Germany)

Investigation of Current Density Distributions of PEM Fuel Cells during Cold Start-up

17:20 to 17:40

Yoshitsugu Sone (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, Chuo-ku, Sagamihara, Japan)

The operability of the PEFC system for the closed environment using the water separation pump

17:40 to 18:00

Ji-rae Kim (Energy Conversion Group, Samsung Electronics, Yongin-si, Korea), Tae-won Song, Jeongsik Ko, Jung O. Park, Kyoung Hwan Choi

Development of Accelerated Lifetime Test for High Temperature-PEMFC Stack

18:00 to 18:20

Francisco M. Cuevas Muñiz (Facultad de Ingeniería, Universidad Autónoma de Querétaro, Querétaro, Mexico), Andres Dector, Minerva Guerra Balcázar, Abraham Ulises Chávez-Ramírez, Janet Ledesma-García, Luis Gerardo Arriaga

Stationary Stack Feeding with a Mixed Fuel-Oxidant Solution in Alkaline Media

18:20 to 18:40

Shengnan Hua (Department of Materials Science and Technology, Nagaoka University of Technology, Niigata, Japan), Sayoko Shironita, Minoru Umeda, Shuichi Suzuki, Takaaki Mizukami, Kunio Nakatsuyama, Kazuma Miura, Kenichi Souma

Corrosion Behavior of Nitriding Stainless Steel for Use of Bipolar Plate in Polymer Electrolyte Fuel Cell

Room : Salon 301

Chaired by: Kenichiro Ota

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

Gilles Taillades (ICGM-AIME, University Montpellier 2, Montpellier, France), Paul Pers

Composite Electrodes for Intermediate Temperature Proton Conducting Fuel

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

Massimiliano Lo Faro (Institute of Advanced Energy Technologies, Italian National Research Council, Messina, Italy), Antonino S. Aricò

Current SOFC R&D activities at CNR-ITAE

15:00 to 15:20

Josef Schefold (EIFER, Karlsruhe University, Karlsruhe, Germany), Annabelle Brisse

Stability of Solid Oxide Cells and Cell Stacks under Steam-Electrolysis Operation

15:20 to 15:40

Natalia Kremliakova (Department of Research and Development, AFCC Automotive Fuel Cell Cooperation Corp., Burnaby, Canada)

Strong Metal Support Interaction (SMSI) in Electrocatalysis for PEMFC on the Example of C/MeO_x/Pt Catalysts (Hybrid Supported Catalysts)

15:40 to 16:00

Padmasree Karinjilottu Padmadas (Sustentabilidad de los Recursos Naturales y Energia, CINVESTAV Unidad Saltillo, Ramos Arizpe, Mexico), Maria del Rocío Valdes Ibarra, Antonio Fernandez Fuentes

Sonochemical Synthesis and Electrical Properties of $A_2B_2O_7$ Pyrochlores

16:00 to 16:20

Yingchao Yu (Chemistry and Chemical Biology, Cornell University, Ithaca, USA), Deli Wang, David Muller, Hector Abruna

Controlling Dealloy Parameters of Pt-Cu Electrocatalysts for Oxygen Reduction Reaction

16:20 to 16:40

Coffee Break

Chaired by: Josef Schefold

16:40 to 17:00

Kenichiro Ota (Green Hydrogen Research Center, Yokohama National University, Yokohama, Japan), Koichi Matsuzawa, Shigenori Mitsushima, Akimitsu Ishihara

Improvement of Catalytic Activity of Ta and Zr Oxide Based Cathode for PEFCs

17:00 to 17:20

Fengzhan Si (Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China), Changpeng Liu, Jianhui Liao, Liang Liang

One-pot Photo-reduction Synthesis of Pt/rGO-TiO_2 Electrocatalyst

17:20 to 17:40

Sayoko Shironita (Department of Materials Science and Technology, Nagaoka University of Technology, Niigata, Japan), Hiroshi Kuboyama, Weiqi Zhang

Hydrogen electrooxidation at small amount Pt loadingon TiO_2-SiO_2 thin film

17:40 to 18:00

Jeongsuk Seo (Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan), Kazuhiro Takanabe, Jun Kubota, Kazunari Domen

Ultrafine Metal Oxide Nanoparticles Based on Group IV or V as Non-platinum Oxygen Reduction Electrocatalysts for PEFCs

Symposium 4d: Novel Materials and Devices for Energy Storage and Conversion: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Salon 302

Chaired by: Omar Solorza-Feria

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

Ezequiel Leiva (Departamento de Matemática y Física, INFIQC- Fac. de Ciencias Químicas. Univ. Nac. de Córdoba, Córdoba, Argentina), Germán Soldano, Agustín Sigal, Mariana Rojas, Guillermina Luque, Carla Robledo, Arnaldo Visintin

Computer modeling of carbon-based materials for hydrogen storage and Li-ion batteries

14:40 to 15:00

Hugo Mosqueda (Facultad de Ingenieria Mecánica y Eléctrica, Universidad Autónoma de Nuevo León, San Nicolas de Los Garza, Mexico)

Anthraquinone aqueous electrografting for storage energy

15:00 to 15:20

Jorge Vazquez-Arenas (Department of Chemistry, Universidad Autonoma Metropolitana, Mexico, Mexico), Ignacio González, Michael Fowler

A rapid evaluation of the impedance of Li-ion batteries using transfer functions

15:20 to 15:40

Junhee Kang (Department of Energy Systems Engineering, DGIST, Daegu, Korea)

First-Principles Study of the Surface Mn Dissolution Processes of Cathode of Li-ion Batteries

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

Marie-Liesse Doublet (Institut Charles Gerhardt, CNRS, Université Montpellier 2, Montpellier, France), Rémi Khatib, Anne-Laure Dalverny, François Varchon, Jean-Sébastien Filhol

Interface Migration in Electrode Materials for Li-Ion Batteries: A First Step towards Multiscale Modeling

16:20 to 16:40

Coffee Break

Chaired by: Alejandro A. Franco

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

Payam Kaghazchi (Electrochemistry, Ulm, Germany)

Modeling of Li Intercalation in Anode Materials

17:00 to 17:20 **Invited**

Michael Eikerling (Department of Chemistry, Simon Fraser University, Burnaby, Canada), Steven G. Rinaldo

Theory of Platinum Mass Balance in Catalyst Layers of PEM Fuel Cells

17:20 to 17:40

M.G. Montes de Oca-Yemha (Department of Materials, UAM-A, Mexico City, Mexico), Miguel Torres, Teresa Licona, Mario Romero Romo, Manuel Palomar-Pardavé

Catalytic Activity of Au-Pd Nanostructures for Methanol Oxidation

17:40 to 18:00

Ka Hung Wong (Department of Mechatronic Systems Engineering, Simon Fraser University, Surrey, Canada), Erik Kjeang

Modeling of the Macroscopic Effects of Chemical Membrane Degradation on Polymer Electrolyte Fuel Cells

18:00 to 18:20

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

Molecular simulation insights into the structural design of highly-conductive alkaline polymer electrolyte

Symposium 5: Corrosion Processes at the Nanoscale

Room : Constitucion

Chaired by: Roger Newman and Monica Santamaria

14:20 to 14:40

Luís Frederico P. Dick (Departamento de Metalurgia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil), Alvaro Pritzel dos Santos

Indirect Determination of Local Stationary Potentiostatic Voltamogramms on CA-15 Stainless Steel Using SVET

14:40 to 15:00

Achim Walter Hassel (Institute for Chemical Technology of Inorganic Materials, Johannes Kepler University Linz, Linz, Austria)

Photo Electrochemical Scanning Droplet Cell Microscopy on $(Fe,Ni,Co)_2O_3WO_4$ Material Libraries and Allied Systems

15:00 to 15:20

Vitor L. Martins (Depto. de Química Fundamental, Instituto de Química, São Paulo, Brazil), Nédher S. Ramírez, Jorge A. Calderon, Roberto Torresi

Electrochemistry of Copper in Ionic Liquids with Different Coordinating Properties

15:20 to 15:40

Daniela Ruiz (Department of Materials, National University of Mexico, Mexico City, Mexico), Alba Covelo, Arturo Barba, Vianey Torres, Miguel Hernandez

Correlation between impedance and noise measurements in sol-gel hybrid coatings on AA22024-T3

15:40 to 16:00
Sungmo Moon (Surface Engineering Division, Korea Institute of Materials Science, Changwon, Korea)
Effects of Anions on the Plasma Electrolytic Oxidation of AZ31 Mg Alloy

16:00 to 16:20
Hong Pyo Kim (Nuclear Material Development Division, Korea Atomic Energy Research Institute, Yuseong, Korea)
Effect of Chromium Content on the Passive Film of Iron Base Alloys during Flow Accelerated Corrosion

16:20 to 16:40
Coffee Break

16:40 to 17:00
Marco Musiani (Institute for Energetics and Interphases, CNR, Padova, Italy), Mark Orazem, Nadine Pebere, Bernard Tribollet, Vincent Vivier
A New Model for the Analysis of Water Uptake in Anti-Corrosion Coatings Exhibiting a CPE Behavior

17:00 to 17:20
Clara Cardona (Department of Metallurgy, UASLP, San Luis Potosi, Mexico), Lilia Narváez, Juana Miranda, Andrés Torres, Trinidad Pérez, Marco González
Inhibition Effect of Dimethylbenzimidazole on the Corrosion Behavior of Austenitic Stainless Steel in Acidic Media

17:20 to 17:40
Mercedes Paulina Chávez-Díaz (Department of Energía, Universidad Autónoma Metropolitana, México, D.F., Mexico), Rosa María Luna-Sánchez, Jorge Vazquez-Arenas, Román Cabrera-Sierra
Mechanism of passivity the Ti-6Al-4V alloy in a physiological Hank's solution

17:40 to 18:00
José Manuel Ramírez-Herrera (Metalurgia/Facultad de Química, Universidad Nacional Autónoma de México, Iztapalapa, Mexico), Francisco Javier Rodríguez Gómez
Passivation magnesium in NaOH and HF for its application as biomaterial

18:00 to 18:20
Benoit Gwinner (DEN/DANS/DPC/SCCME/LECNA, CEA, Gif sur Yvette, France), H. Badji, N. Brijou-Mokrani, P. Fauvet, N. Gruet, P. Laghoutaris, F. Miserque, R. Robin, M. Tabarant
Corrosion of Zirconium in Nitric Acid in Absence and Presence of Fluoride

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Daniel Mandler

14:20 to 15:00 **Keynote**
Krishnan Rajeshwar (Department of Chemistry and Biochemistry, University of Texas at Arlington, Arlington, USA)
Bioinspired Concepts for Electro- and Photocatalysis of Targeted Multi-electron Processes

15:00 to 15:20
Wei-nien Su (Graduate Institute of Applied Science and Technology, National Taiwan University of Science and Technology, Taipei, Taiwan), Abiye Kebede Agegnehu, Chun-Jern Pan, Men-Che Tsai, John Rick, Bing Joe Hwang
Visible light responsive nanocomposite of vanadium doped titania nanorod with highly reduced graphene oxide for enhanced solar hydrogen production

15:20 to 15:40
Pawel J. Kulesza (Department of Chemistry, University of Warsaw, Warsaw, Poland), Renata Solarska, Krzysztof Miecznikowski, Sylwia Zoladek, Sebastian Fiechter

Photoelectrochemical water splitting at tungsten oxide based hybrid materials utilizing polyoxometallate-stabilized hematite or gold nanoparticles

15:40 to 16:00
Yoshitaka Tateyama (International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan), Koharu Aikawa, Masato Sumita

Redox Reaction Mechanisms at TiO_2 - Water Interfaces: A DFT Molecular Dynamics Study

16:00 to 16:20
Próspero Acevedo-Peña (Department of Chemistry, Universidad Autónoma Metropolitana-Iztapalapa, Mexico City, Mexico), Federico González, Ignacio González

Self Ordered TiO_2 Anodic Structures for Photoelectrochemical Water Oxidation: From Nanoporous to Sponges like Films

16:20 to 16:40
Coffee Break

Chaired by: Pawel J. Kulesza and Krishnan Rajeshwar

16:40 to 17:20 **Keynote**
Daniel Mandler (The Hebrew University of Jerusalem, Jerusalem, Israel), Liang Liu, Shay Yelinek

Nanomaterials and Nanocomposites Based Films by Electrochemical Deposition

17:20 to 17:40
Michael Busch (Center for Atomic-Scale Materials Design, Technical University of Denmark, Lyngby, Denmark), Niels Theis Bendtsen, Jan Rossmeisl

Tuning the Activity of Manganese Oxides for Water Oxidation by Doping with Inert Ions

17:40 to 18:00
Manuel Rodríguez Pérez (Applied Physics, CINVESTAV-Mérida, Mérida, Mexico), Cecilia Chacón Roa, Geonel Rodríguez Gattorno, Gerko Oskam

Photocatalytic Activity of WO_3 as a Function of the Crystal Phase and Morphology

18:00 to 18:20
Michel Zoontjes (Department of EEMCS, University of Twente, Enschede, Netherlands), Mark Huijben, Jonas Baltrusaitis, Guido Mul, Wilfred van der Wiel

Visible light induced water splitting on a chip

TUESDAY PM

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Room : Salon 304

Chaired by: Stanko Brankovic

14:20 to 15:00 **Keynote**
Jay Switzer (Department of Chemistry, Missouri University of Science and Technology, Rolla, USA), Jakub Koza, Ying-Chau Liu

Catalysis of the Oxygen Evolution Reaction on Electrodeposited Co_3O_4, $Co(OH)_2$, and CoOOH

15:00 to 15:20 **Invited**
Tahar Azib (LITEN, CEA, Grenoble, France), Hélène Porthault, Frédéric Le Cras, Raphaël Salot

$LiCoO_2$ thin film deposition for lithium microbatteries: The promising electrochemical-hydrothermal route

15:20 to 15:40 **Invited**
Gery Stafford (Materials Science and Engineering Division, National Institute of Standards and Technology, Gaithersburg, USA), Manon Lafouresse, Carlos Beauchamp, Ugo Bertocci

Dynamic Stress Analysis at Solid Electrodes

15:40 to 16:00

Aoife Morrin (School of Chemical Sciences, Dublin City University, Dublin, Ireland), Blanaid White, Aoife Power, Brian Gorey

Conducting Polymer Structures Housed in Thin-Layer Microfluidic Channels for Electroanalysis

16:00 to 16:20

Yongliang Zhou (Department of Chemistry, Xiamen University, Xiamen, China), Haitao Fan, Wen Sun, Daxiao Zhang, Dongjie Hu, Qin Zhang

Nanofabrication technique based on PAG electrochemical soft stamping

16:20 to 16:40

Coffee Break

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

Shi-Gang Sun (Department of Chemistry, Xiamen University, Xiamen, China)

Supported Pt nanocatalysts with high surface step density and high activity prepared by electrochemistry

17:00 to 17:20

Yan-Xia Jiang (Department of Chemistry, Xiamen University, Xiamen, China), Yan-yan Li, Ming-Hui Chen, Shi-Gang Sun

Electrochemically Shape-Controlled Synthesis of Platinum Nanocrystals with High Electrocatalytic Activity and Their Shape Evolution

17:20 to 17:40

Rosaria Anna Picca (Chemistry Department, Università degli Studi di Bari - Aldo Moro, Bari, Italy), Maria Chiara Sportelli, Luigia Sabbatini, Nicola Cioffi

New Insights on the Electrochemical Development of II Generation Nano-Antimicrobials

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Juan M. Peralta Hernández and Giovanni Zangari

14:20 to 14:40

Sergio Ferro (Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara, Italy), Davide Rosestolato, Paolo Formaglio, Achille De Battisti

Electrochemical Oxidation Processes for the Treatment of Water Intended for Human Consumption

14:40 to 15:00

Sergi Garcia-Segura (Department de Quimica Fisica, Universitat de Barcelona, Barcelona, Spain), Eliane Bezerra Cavalcanti, Conchita Arias, Enric Brillas

Complete Removal of Chloramphenicol by Electrochemical Advanced Oxidation Processes. By-Products Identification and Scaling Up to Pre-Pilot Plant

15:00 to 15:20

Ricardo Salazar (Ciencias del Ambiente, Universidad de Santiago de Chile, Santiago, Chile), Carlos Alberto Martinez-Huitle, Camilo Gonzalez-Vargas, M. Soledad Ureta-Zañartu

Electrocatalytic Materials for Degradation of Disperse Yellow Dye: Role of pH and Supporting Electrolyte

15:20 to 15:40

Monica Cerro-Lopez (Department of Chemical and Biological Sciences, UDLAP, Puebla, Mexico), Yunny Meas-Vong, Miguel Mendez-Rojas, Carlos Alberto Martinez-Huitle, Marco Quiroz

Enhanced Efficiency for Photoelectrocatalytic Oxidation of Methyl Red using a Hybrid Electrode Material based on Titania Nanotubes

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

Enric Brillas (Departamento de Química Física, Universitat de Barcelona, Barcelona, Spain)

Advances in the Solar Photoelectro-Fenton Treatment of Organic Pollutants in Waters

16:20 to 16:40

Coffee Break

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

Carlos Alberto Martinez-Huitle (Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Djalma Ribeiro da Silva, Nedja Suely Fernandes

Applicability of electrochemical oxidation process for treating real effluents

17:00 to 17:20

Rodnei Bertazzoli (Department of Materials Engineering, State University of Campinas, Campinas, Brazil), Raul Sebastião Figueiredo

Reticulated β-PbO_2 Anode for Emerging Pollutants Oxidation: Application to Diazepinic Compounds

17:20 to 17:40

Celestino Odín Rodríguez Nava (Biotecnología and Química, Universidad Autónoma Metropolitana, Iztapalapa, Mexico), Octavio Loera-Corral, Ignacio González

Evaluation of Pharmaceutical Compounds Degradation Containing in Synthetic Wastewater using the FM01-LC Electrochemical Reactor and its Effect on the Microbial Population Structure of an Activated Sludge

17:40 to 18:00

Esperanza Mena (Department of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain)

Effects of DC on the activity of a diesel-degrading microorganisms culture

18:00 to 18:20

Salvador Cotillas (Department of Chemical Engineering, University of Castilla La-Mancha, Ciudad Real, Spain), Javier Llanos, Pablo Cañizares, Eulalio Gracia, Manuel A. Rodrigo

Novel electrodisinfection/electrocoagulation integrated process with iron bipolar electrodes for wastewater reuse

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis and Electrocatalysis

Room : Salon 303

Chaired by: Héctor Fernández and Flavio Maran

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

Soledad Bollo (Pharmacology and Toxicology, University of Chile, Santiago, Chile)

Molecular electrochemistry: A tool for the construction and operation of sensors

14:40 to 15:00

Munetaka Oyama (Department of Material Chemistry, Grad School of Engineering, Kyoto University, Kyoto, Japan), Yosuke Nakayama, Xiaomei Chen

Electrocatalytic Oxidation of Water on a Gold-Nanoparticle-Modified Palladium Electrode

15:00 to 15:20

Chang-Deng Xu (Department of Energy Chemistry, Xiamen University, Xiamen, China), De-Hao Chen, Ling Chen, Chun-Hua Zhen

Electrochemical Study of CTAB with Pt Single Crystal Surfaces Towards Understanding the Structure-tuning Effect in Shape-Controlled Synthesis of Metal Nanocatalysts

15:20 to 15:40

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

Oxidation of Ascorbic Acid through the Photo-Excitation Energy Transfer between Titanium(IV)-Porphyrin Complex and Oxygen Molecule

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

Miguel Velazquez-Manzanares (Instituto de Biotecnologia, Universidad del Papaloapan, San Juan Bautista Tuxtepec, Mexico)

Electron and ion transfer reaction at the interface of two immiscible electrolyte solutions

16:00 to 16:20

Pekka Peljo (Department of Chemistry, Aalto University, Espoo, Finland), Liang Qiao, Lasse Murtomäki, Christoffer Johans, Hubert Girault, Kyösti Kontturi

Electrochemically Controlled Proton-Transfer-Catalyzed Reactions at Liquid–Liquid Interfaces

16:20 to 16:40

Coffee Break

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

Felipe J. González (Departamento de Química, Centro de Investigación y de Estudios Avanzados del IPN, Mexico, Mexico), Annia Galano, Miguel A. González, Lindsay S. Hernández, Dulce M. Hernández, Pablo D. Astudillo

Modification of Carbon Surfaces by Mediated Oxidation of Tetrabutylammonium Salts of Carboxylic Acids

17:20 to 17:40

Tetsuhiro Kobayashi (Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan), Junya Sendo, Hiroaki Maeda, Yusuke Yabusaki, Mariko Miyachi, Ryota Sakamoto, Yoshinori Yamanoi, Hiroshi Nishihara

Stepwise Formation of Fe(tpy)2 Molecular Wires on Si(111) and Their AFM Observation

17:40 to 18:00

Viatcheslav Jouikov (UMR 6226 CPM, University of Rennes 1, Rennes, France)

Electrogenerated Cation Radicals of Metallatranes, their Electronic and Electromechanic Properties: Bridging the Gap to Conjugated Surface Grafting

18:00 to 18:20

Eduardo Martinez (Department of Electrochemistry, CIDETEQ, Queretaro, Mexico), Carlos Frontana

Relationship Between Stability of Complexes Formed by Electrochemically Conrolled Hydrogen Bonding and the Chemical Structures of Nitrocompounds

18:20 to 18:40

Mauricio Isaacs (Department of Inorganic Chemistry, Pontificia Universidad Catolica de Chile, Santiago, Chile), Macarena Garcia, Macarena Ohlbaum, Paulina Dreyse

Influence of the Counter Anion in “Layer-by-Layer” Tetra-ruthenated Porphyrins Modified-Electrodes on the Electro and Photoelectrochemical Reduction of Carbon Dioxide

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface and Electrocatalysis

Room : Salon 308

Chaired by: Michael Eikerling and Ezequiel Leiva

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

Marc Koper (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)

Proton-coupled electron transfer in electrocatalysis: Theory and experiment

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

Renat Nazmutdinov (Department of Inorganic Chemistry, Kazan National Research Technological University, Kazan, Russia), Viktoria Nikitina, Sergey Kislenko, Michael Bronshtein, Galina Tsirlina

Challenges of Electron Transfer across a Metal Electrode/Room Temperature Ionic Liquid Interface: A Theoretical and Computational Study

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

Andrew Gewirth (Department of Chemistry, University of Illinois, Urbana, USA), Brandon Long, Kevin Schmitt, Hadi Tavassol

Using Vibrational Spectroscopy and Electrochemical Stress Measurements to Interrogate Metal Electrode Surfaces

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

Nuria Garcia-Araez (Department of Chemistry, University of Southampton, Southampton, United Kingdom), Victor Climent, Juan M. Feliu, Ellen H.G. Backus, Mischa Bonn, Huib J. Bakker, Paramaconi Rodriguez, Marc T.M. Koper

Water Adsorption on Metal Electrodes

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

Enrique Herrero (Instituto de Electroquímica, Universidad de Alicante, Alicante, Spain), Manuel J.S. Farias, Carlos Buso-Rogero, Ruben Rizo

pH and electrode potential effects on the electrochemical interface of platinum electrodes

16:20 to 16:40

Coffee Break

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

Axel Gross (Institute of Theoretical Chemistry, Ulm University, Ulm, Germany)

The structure of electrochemical electrode-electrolyte interfaces studied from first principles

17:20 to 17:40 **Invited**

Jan Rossmeisl (Department of Physics, Technical University of Denmark, Lyngby, Denmark)

Atomic Scale Modelling of Charge Transfer Reactions over Electrochemical Interfaces

17:40 to 18:00

Tsutomu Takamura (Department of Applied Chemistry, Harbin Institute of Technology, Yokohama, Japan), Junji Suzuki, Lijun Fu

Mass Transfer Behavior of Li Particles via the Nano-Spacing Vacancy between Solid Phases of an Electrode during Polarization

18:00 to 18:20 **Invited**

Jean-Sébastien Filhol (Institut Charles Gerhardt, Université Montpellier 2, Montpellier, France), Mikhail Mamatkulov, Marie-Liesse Doublet

Conceptual Electrochemistry at Interfaces

18:20 to 18:40

Manuel Landstorfer (LG3, Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany), Clemens Guhlke, Wolfgang Dreyer

Capacity of Electrochemical Interfaces

Wednesday 11 September 2013

ROOM	Auditorium	Hall C	Hall D	Salon 301	Salon 302	Salon 303	Salon 304	Salon 305	Salon 306	Salon 307	Salon 308	Constitución
08:30 -09:30	**Plenary Lecture** Masahiro Watanabe											
	Symposium 4c	**Symposium 4c**	**Symposium 6**	**Symposium 4c**	**Symposium 4d**	**Symposium 11**	**Symposium 7**	**Symposium 8**	**Symposium 4a**	**Symposium 3**	**Symposium 12**	**Symposium 5**
09:40 - 10:00	B. Pivovar	J. Owen	T. Hamann	A. Maljusch	T. Mashio	H.Nishihara	Kyoung-Shin Choi	M. A. Rodrigo	J. Miller	W. Schuhmann	Kei Murakoshi	S. Lillard
10:00 - 10:20			F. Javier Recio	W. Nogala		P. Romanczyk						N. Pebere
10:20 - 10:40	E. Toyoda	Y. Ando	B. Fabre	O. Solorza-Feria	Byungchan Han	E. Galvan-M.	Dongping Zhan	A. C. Quiroz	T. Brousse	B. Wolfrum	Zhong-Qun Tian	M. Pech-Canul
10:40 - 11:00	K. Tammeveski	Hyunkyung Kim	J. P. Kollender	L. Castanheira	N. Bonnet			R. E. Perez	Kwang Bum Kim	H. Braustein	F. Nagasawa	Dong-Jin Kim
11:00	Coffee Break **Poster Session 3 :** Symposium 1, 8, 14											

Wednesday, 11 September 2013 - Morning

Plenary Lecture

Room : Auditorium

Chaired by: Hasuck Kim, Daegu Gyeongbuk Institute of Science and Technology, Korea

08:30 to 09:30 **Electrochimica Acta Gold Medal**

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

Development of Advanced Materials for Fuel Cells Based on New Concepts

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

Room : Salon 307

Chaired by: Erika Roxana Larios Duran and Fred Lisdat

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

Wolfgang Schuhmann (Analytische Chemie - Elektroanalytik & Sensorik, Ruhr-Universität Bochum, Bochum, Germany), Sascha Pöller, Dmitrii Guschin, Minling Shao, Jeevanthi Vivekananthan, Piyanut Pinyou, Nicolas Plumeré

Design of redox polymers as optimized wires between immobilized enzymes and electrode surfaces

10:20 to 10:40

Bernhard Wolfrum (Institute of Bioelectronics (PGI-8/ICS-8), Forschungszentrum Jülich, Jülich, Germany), Martin Hüske, Enno Kätelhön, Alexey Yakushenko, Andreas Offenhäusser

Redox cycling electrochemistry in nanoporous and nanocavity devices

10:40 to 11:00

Harold Braustein (Department of Molecular Microbiology and Biotechnology, Tel Aviv University, Tel Aviv, Israel), Gideon Fleminger, Daphna Ben Yakov, Clementiy Levkov, Yifat Bezalel, Abid Nasser, Judith Rishpon

Micro-flow Disposable Polymers Electrochemical Kit Biosensor: Quality Assurance Testing Model of Virus Quantification

11:00 **Coffee Break and Poster Session 3**

Symposium 4a: Novel Materials and Devices for Energy Storage and Conversion: Electrochemical Capacitors

Room : Salon 306

Chaired by: Elzbieta Frackowiak

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

John Miller (JME, Inc., Beachwood, OH, USA)

Electrochemical Capacitors Offering Ultra-high Power: Graphene Nanosheet Electrode Device Performance

10:20 to 10:40 **Invited**

Thierry Brousse (IMN/Polytech Nantes, University of Nantes, CNRS, Nantes, France)

Functionalized Carbon Electrodes for Electrochemical Capacitors

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

Kwang Bum Kim (Department of Material Science and Engineering, Yonsei University, Seoul, Korea)

Synthesis and electrochemical properties of rutheniumoxide nanoflakes for electrochemical capacitors

11:00 **Coffee Break and Poster Session 3**

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Robert Kostecki

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

John Owen (Department of Chemistry, University of Southampton, Southampton, United Kingdom)

Redox Mediators and Shuttles for Lithium-Air Batteries

10:20 to 10:40

Yasunobu Ando (Nanosystem Research Institute, National Institute of Advanced Science and Technology, Tsukuba, Japan), Yoshiumi Kawamura, Tamio Ikeshoji, Minoru Otani

Anion reduction of ionic-liquid molecules coupled with electron transfer from lithium electrodes studied by first-principles calculations

10:40 to 11:00

Hyunkyung Kim (Department of Material Science and Engineering, Yonsei University, Seoul, Korea), Kwang Bum Kim, Ha-Kyung Roh

Synthesis of nano-$Li_4Ti_5O_{12}$ decorated on non-oxidizedcarbon nanotubes for high rate lithium-ion batteries

11:00

Coffee Break and Poster Session 3

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Deborah Jones and Karl Mayrhofer

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

Bryan Pivovar (Hydrogen Technologies and Systems Center, National Renewable Energy Lab, Golden, USA), Brian Larsen, Shaun Alia, Jason Zack, Svitlana Pylypenko, K. C. Neyerlin, Shyam Kocha

Extended Surface Pt Electrocatalysts Synthesized by Galvanic Displacement

10:20 to 10:40

Eishiro Toyoda (Fuel Cell System Lab., Toyota Central R&D Labs., Inc., Nagakute, Japan), Ryosuke Jinnouchi, Tetsu Ohsuna, Tatsuya Hatanaka, Shigeki Otani, Takashi Aizawa, Yoshiaki Kido, Kei Mitsuhara, Yu Morimoto

Pt Thin Layer on Metal Diboride for Oxygen Reduction Electrocatalyst

10:40 to 11:00

Kaido Tammeveski (Institute of Chemistry, University of Tartu, Tartu, Estonia), Heiki Erikson, Madis Liik, Ave Sarapuu, Margus Marandi, Väino Sammelselg

Oxygen Reduction on Electrodeposited Palladium Coatings on Gold

11:00

Coffee Break and Poster Session 3

Room : Salon 301

Chaired by: Omar Solorza-Feria and Gilles Taillades

09:40 to 10:00

Artjom Maljusch (Department of Analytical Chemistry, Ruhr-Universität Bochum, Bochum, Germany), John B. Henry, Aliaksandr S. Bandarenka, Wolfgang Schuhmann

An integrated SKP-SECM system: Linking surface properties and electrocatalytic activity

10:00 to 10:20

Wojciech Nogala (Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Kannan Palanisamy, Sylwester Gawinkowski, Martin Jonsson-Niedziolka, Marcin Opallo

Scanning Electrochemical Microscopy Local Deposition of Metals for Optimization of Catalysts and Supports for Surface Enhanced Raman Spectroscopy

10:20 to 10:40

Omar Solorza-Feria (Department of Chemistry, Centro de Investigación y de Estudios Avanzados del IPN, Mexico, Mexico), Diana Martínez-Casillas, Karina Suarez-Alcantara, Sophie Canton, Hector Calderon

HRTEM and XAS characterizations of Pd-based cathode nano-catalysts in PEMFC

10:40 to 11:00

Luis Castanheira (LEPMI - ESME, Grenoble INP, Grenoble, France), Laetitia Dubau, Frederic Maillard

Effect of intermediate characterizations in long-term degradation tests: An IL-TEM study

11:00

Coffee Break and Poster Session 3

Symposium 4d: Novel Materials and Devices for Energy Storage and Conversion: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Room : Salon 302

Chaired by: Kourosh Malek

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

Tetsuya Mashio (Nissan Research Center, Nissan Motor Co., Ltd., Kanagawa, Japan), Atsushi Ohma

Challenges and Analysis of PEMFC Catalyst Layers for Lowering Platinum Loading

10:20 to 10:40

Byungchan Han (Department of Energy Systems Engineering, DGIST, Daegu, Korea), Inhye Kwon, Min Ho Seo

Ab-Initio Computational Studies of Doped Graphene Materials for High Functional Catalysts in Fuel Cell Application

10:40 to 11:00

Nicephore Bonnet (Nanosystem Research Institute, AIST, Tsukuba, Japan), Minoru Otani

A First-Principles Study of the Dynamical Coupling between CO and the Electrolyte on a Pt Surface

11:00

Coffee Break and Poster Session 3

Symposium 5: Corrosion Processes at the Nanoscale

Room : Constitucion

Chaired by: Kevin Ogle

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

Scott Lillard (Chemical and Biomolecular Engineering, University of Akron, Akron, USA), Mathew Brackman, Kevin Kreider, Gerald Young

A Model of Damage Evolution During Crevice Corrosion of Nickel Base Alloys

10:00 to 10:20

Nadine Pebere (Department of, CIRIMAT, UMR CNRS 5085, Toulouse, France)

Investigation on crevice corrosion of a martensitic stainless steel by using a thin-layer cell

10:20 to 10:40

Maximo Pech-Canul (Física Aplicada, Cinvestav-IPN-Unidad Mérida, Mérida, Mexico), Marbella Echeverría, Martin Pech-Canul, Pascual Bartolo-Pérez

Effect of Silicon on Corrosion Resistance of Al-Si-Mg and Al-Si Alloys

10:40 to 11:00

Dong-Jin Kim (Nuclear Materials Division, KAERI, Daejeon, Korea), Hong Pyo Kim, Seong Sik Hwang

Investigation of Oxide Formed on Steam Generator Tube Materials for Nuclear Power Plants Exposed to Caustic Solutions with Lead Oxide

11:00

Coffee Break and Poster Session 3

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Bruno Fabre and Bernardo Frontana-Uribe

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

Bruno Fabre (Institut des Sciences Chimiques de Rennes, UMR 6226 CNRS, University of Rennes 1, Rennes, France), M. Graça H. Vicente, Frédéric Barrière

Redox-Active Conducting Polymers Functionalized by Carboranes and Derived Metallabisdicarbollide Centers

10:00 to 10:20

Jan Philipp Kollender (Institute for Chemical Technology of Inorganic Materials, Johannes Kepler University, Linz, Austria), Jacek Gasiorowski, Andrei Ionut Mardare, Niyazi Serdar Sariciftci, Achim Walter Hassel

Photoelectrochemical characterization of sub-micro-gram amounts of organic semiconductors using scanning droplet cell microscopy

10:20 to 10:40 **Invited**

Thomas Hamann (Department of Chemistry, Michigan State University, East Lansing, USA), Benjamin Klahr, Omid Zandi, Kelley Young

Photoelectrochemical Investigation of Water Splitting with Hematite Thin Film Electrodes

10:40 to 11:00

Francisco Javier Recio (Department of Materials Science, Universidad Santiago de Chile, Santiago, Chile), Federico Tasca, Paulina Cañete, José Zagal

A New Strategy to Optimize the Electrocatalytic Activity of MN4 Complexes. Hydrazine Oxidation

11:00

Coffee Break and Poster Session 3

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Room : Salon 304

Chaired by: Jay Switzer

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

Kyoung-Shin Choi (Department of Chemistry, University of Wisconsin-Madison, Madison, USA)

Electrochemical Synthesis and Modification of Semiconductor Electrodes for Use in Solar Energy Conversion

10:20 to 10:40

Dongping Zhan (Department of Chemistry, Xiamen University, Xiamen, China), Li Huang, Ding Yuan, Zhong-Qun Tian

Electric Performance of Electrosynthesized M-TCNQ Nanomaterials

11:00

Coffee Break and Poster Session 3

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Enric Brillas and Francois Lapicque

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

Manuel Andres Rodrigo (Department of Chemical Engineering, Universidad de Castilla La Mancha, Ciudad Real, Spain), Pablo Cañizares, Salvador Cotillas, Javier Llanos, Cristina Sáez

Electrochemically assisted disinfection of treated wastewater for reuse

10:20 to 10:40

Anaid Cano Quiroz (Centro Conjunto de Investigación en Química Sustentable, Universidad Autonoma del Estado de Mexico, Toluca, Mexico)

Design of an Electrochemical Reactor Using Computational Fluid Dynamics (CFD) for a BDD Electrode Configuration

10:40 to 11:00

Rubi Enciso Perez (Instituto de Metalurgia, Universidad Autonoma de San Luis Potosi, San Luis Potosi, Mexico), Jose Angel Delgadillo Gomez, Israel Rodríguez Torres

Analysis and Validation of the Hydrodynamics of an Electrodialysis Cell using Computational Fluid Dynamics

11:00

Coffee Break and Poster Session 3

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis

Room : Salon 303

Chaired by: Felipe J. González

09:40 to 10:00

Hiroshi Nishihara (Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan), Ryota Sakamoto, Tetsuya Kambe, Kenji Takada, Ken Hoshiko, Ryota Matsuoka

Interfacial Synthesis of Redox-active and Conducting Metal Complex Nanosheets

10:00 to 10:20

Piotr Romanczyk (Physical Chemistry Group, Cracow University of Technology, Krakow, Poland), Mariusz Radon, Klemens Noga, Stefan Kurek

Autocatalytic Dehalogenation Set Off by Dissociative Electron Transfer through C-H...O Hydrogen Bond

10:20 to 10:40

Elizabeth Galvan-Miranda (Facultad de Quimica, Department of Physical Chemistry, Universidad Nacional Autonoma de Mexico, México, Mexico), Gerardo Zaragoza-Galan, Ernesto Rivera, Martha Aguilar-Martinez

Dendrimer Functionalized SWNT: Electrochemical and Photoinduced Electron Transfer Characterization

11:00

Coffee Break and Poster Session 3

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface and Electrocatalysis

Room : Salon 308

Chaired by: Jacek Lipkowski

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

Kei Murakoshi (Deparment of Chemistry, Graduate School of Science, Hokkaido University, Sapporo, Japan)

Plasmon-induced Photoexcitation of Molecules on Metal Surfaces

10:20 to 10:40 **Invited**

Zhong-Qun Tian (College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China), Yi-Fan Huang, Wei Wang, Liu-Bin Zhao, Hong-Yu Guo, Dongping Zhan, De-Yin Wu, Bin Ren

Plasmon-assisted interaction among photon, metal and molecule at the electrified interfaces of micro electrodes

10:40 to 11:00

Fumika Nagasawa (Department of Science, Hokkaido University, Sapporo, Japan), Mai Takase, Kei Murakoshi

Strong Coupling between Localized Surface Plasmon and Dye Exitons at Metal Nano-Gap Structure

11:00

Coffee Break and Poster Session 3

Thursday 12 September 2013

ROOM	Auditorium	Hall C	Hall D	Salon 301	Salon 302	Salon 303	Salon 304	Salon 305	Salon 306	Salon 307	Salon 308	Constitución
08:30 -09:30	Plenary Lecture Douglas R. MacFarlane											
	Symposium 4c	**Symposium 4b**	**Symposium 6**	**Symposium 4c**	**Symposium 13**	**Symposium 9**	**Symposium 10**	**Symposium 8**	**Symposium 4a**	**Symposium 2**	**Symposium 12**	**Symposium 5**
09:40 - 10:00	Junji Inukai	N. Omar	Enn Lust	M. Chisaka	J. Fergus	M. Free	F. Paolucci	J. M. Bisang	F. Béguin	C. Amatore	S. Cherevko	J.A. Ramírez
10:00 - 10:20		Jae Myung Lee		E. Härk			J. Zagal	E. G. S. Ramos			J. M. Feliu	J. De Leon A.
10:20 - 10:40	Coffee Break											
10:40 - 11:00	K. Caldwell	M. Cassir	A. OMullane	N. Alonso-V.	K. Rajeshwar	A. Recéndiz	S. C. de Torresi	T. Hoshino	F. Soavi	R. Barbosa	G. Jerkiewicz	B. Tribollet
11:00 - 11:20	B. Geboes		E. Frackowiak	X. Tuaev		Y. Yamada		S. Freguia	G. Zheng Chen	N. Ferreira		C. Vazquez
11:20 - 11:40	I. Spanos	J. Cardoso	C. Janaky	K. Mayrhofer	E. Vieil	G. Orozco	C. Frontana		V. Ruiz	Yang Tian	P. Malacrida	M. L. Trujillo
11:50 - 12:50	General Assembly: Hall D											
13:00	Lunch											
13:10 - 14:10			Divisional Meetings: Rooms 301 to 307									
				Symposium 4b								
14:20 - 14:40	Zhi-You Zhou	A. Visintin	D. Bélanger	R. Torresi	C. Brett	A. Alonso	R. Kataky	L. Alvarado	H. Andreas	D. Evrard	J. Erlebacher	
14:40 - 15:00	M. Inaba	Myeongseong Kim		H. Youn		Tian Zhang	D. Guzmán	Hyunseok Kim		M. Páez	S. Brankovic	
15:00 - 15:20	H. Uchida	Jie Li	D. Cedillo	K. Ozoemena	M. Orazem	L. Moron	F. Lemaître	M. T. O. Guzmán	A. Burke	H. Ayoub	A. Kucernak	
15:20 - 15:40	J. Masa	Y. Maruyama	M. Alpuche-A.	E. Paillard		E. Asselin	E. Labbe	S. Gelover	K. Pinkert	S. Verguts		
15:40 - 16:00	T. Soboleva	O. Mendoza	M. Gustafson	E. Ventosa	C. Ponce de L.	J. Solis-M.	De-Yin Wu	A. I. Vázquez A.	G. Lota	C. Ntola	H. Baltruschat	
16:00 - 16:20	M. Escudero-E.	Yi-Hsiu Chen	L. Vázquez-G.	H. Castaneda		A. Meléndez	R. Webster	E. Rivero	D. Rochefort	M. Bravo-A.	A. Zalineeva	
16:20 - 16:40	Coffee Break											
16:40 - 17:00	S. Ganesa	Junhui Jeong	R. Rincón	F. La Mantia	J. Genesca	O. Olvera	A. Credi	T. Perez	M. Morita	A. Esteve-N.	P. Krtil	
17:00 - 17:20		Chao-Yen Kuo	K. M. C. Vega S.	L. Roué		G. Urbano		J. Nava			J. Ren	
17:20 - 17:40		Jing Li	S. Palmas	O. Rosas	J. Solla-Gullon	R. Cruz-Gaona	G. Adolfo Rivas	P. Mandin	R. Slade	Cesar Torres	D. A. Crespo-Y.	
17:40 - 18:00		Jie Liu		J. Swiatowska	Alanah Fitch	I. Lazaro	M. Rueda		A. Jänes	B. Virdis	I.E.L. Stephens	
18:00 - 18:20						Rui Kong			Suk Woo Lee	Yige Zhou	P. Zelenay	
18:20 - 18:40									Pei Kang Shen			

Thursday, 12 September 2013 - Morning

Plenary Lecture

Room : Auditorium

Chaired by: Carlos Frontana, Centro de Investigación y Desarrollo Tecnológico en Electroquímica-CIDETEQ, Mexico

08:30 to 09:30

Douglas R. MacFarlane (ARC Centre of Excellence for Electromaterials Science, Monash University, Clayton, Australia)

Ionic Liquids in Electrochemical Devices and Processes – From Solar Cells and Water Splitting to Thermocells

Symposium 2: Sensing in Living Systems

Room : Salon 307

Chaired by: Fethi Bedioui

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

Christian Amatore (Département de Chimie, École Normale Supérieure, Paris, France)

Investigating Oxidative Stress at the Single Cell Level

10:20 to 10:40

Coffee Break

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

Rui Barbosa (Center for Neuroscience and Cell Biology, Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal), Ricardo Santos, Cátia Lourenço, Ana Ledo, Nuno Ferreira, João Laranjinha

In Vivo Monitoring of Nitric Oxide and Other Relevant Neurochemicals in the Rat Brain Using Electrochemical Microsensors

11:00 to 11:20

Nuno Ferreira (Center for Neurosciences and Cell Biology, University of Coimbra, Coimbra, Portugal), Ricardo Santos, João Laranjinha, Rui Barbosa

Direct Measurement of Ascorbate in the Living Brain Using Carbon Nanotube-Modified Microelectrodes

11:20 to 11:40

Yang Tian (Department of Chemistry, Tongji University, Shanghai, China)

A Carbon Dot-Based Surface for Electrochemical Determination of Cerebral Cu^{2+}

11:50

General Assembly of the International Society of Electrochemistry

Symposium 4a: Novel Materials and Devices for Energy Storage and Conversion: Electrochemical Capacitors

Room : Salon 306

Chaired by: Ana Karina Cuentas-Gallegos

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

François Béguin (Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznan, Poland), Qamar Abbas, Paula Ratajczak, Elzbieta Frackowiak

A new generation of high voltage and environment friendly supercapacitor using salt-based aqueous electrolytes

10:20 to 10:40

Coffee Break

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

Francesca Soavi (Dipartimento di Chimica Giacomo Ciamician, University of Bologna, Bologna, Italy), Catia Arbizzani, Marina Mastragostino

Self-discharge of Ionic Liquid-Based Supercapacitors

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

George Zheng Chen (Department of Chemical and Environmental Engineering, University of Nottingham, Nottingham, United Kingdom)

Interfacial Conjugation in Hybrids of Nano-Carbon and Pseudo-Capacitive Materials

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

Vanesa Ruiz (Novel Energy Oriented Materials Group, CIN2-CSIC, Bellaterra, Spain), Jullieth Suarez-Guevara, Pedro Gomez-Romero

Exploring the Use of Polyoxometalates in Aqueous Electrolyte Supercapacitors

THURSDAY AM

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Philippe Fortgang and Fabio La Mantia

09:40 to 10:00

Noshin Omar (Department of Electrical Engineering and Energy Technology, Vrije University Brussel, Brussels, Belgium), Mohamed Abdel Monem, Grietus Mulder, Justin Salminen, Omar Hegazy, Jelle Smekens, Thierry Coosemans, Peter Van den Bossche, Joeri Van Mierlo

Examination of the Impact of the Storage Temperature on the Main Ageing Parameters in Lithium-Ion Iron Phosphate Based Batteries

10:00 to 10:20

Jae Myung Lee (Secondary Battery Team, RIST (Research Institute of Industrial Science &Technology), Pohang, Korea), In Sung Lee, Young Jae Choi, Sang Cheol Nam, Do Hyeong Kim

Low temperature synthesis of lithium ion conductive $Li_7La_3Zr_2O_{12}$

10:20 to 10:40

Coffee Break

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

Michel Cassir (LECIME, UMR 7575 CNRS, Chimie ParisTech, Paris, France), Virginie Lair, Valérie Albin

High-temperature fuel cells, from nanostructures to new concepts

11:20 to 11:40

Judith Cardoso (Department of Physics, Universidad Autónoma Metropolitana, Mexico, Mexico), Ignacio González, Dora Nava, Sergio Gutiérrez

Design of a Zwitterionic polymer with a flexible lateral chain and its electrochemistry properties

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Nicolas Alonso-Vante and Massimiliano Lo Faro

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

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

PEFCs Viewed on the Angstrom Scale to the Centimeter Scale

10:20 to 10:40

Coffee Break

10:40 to 11:00

Keegan Caldwell (Department of Chemistry, George Washington University, Washington DC, USA), David Ramaker, Christina Roth, Sebastian Kaserer

XAS Investigation of Anode Poisons in HT-PEMFCs

11:00 to 11:20

Bart Geboes (Department of Applied Engineering and Technology - Chemistry, University College of Antwerp, Antwerp, Belgium), Ioanna Mintsouli, Benny Wouters, Jenia Georgieva, Sotiris Sotiropoulos, Eugenia Valova, Stephan Armyanov, Tom Breugelmans, Annick Hubin

Surface and Electrochemical Characterisation of a Pt-Cu/C Core-Shell Electrocatalyst, Prepared by Galvanic Displacement

11:20 to 11:40

Ioannis Spanos (Department of Chemistry, University of Copenhagen, Copenhagen, Denmark), Matthias Arenz

Advances towards optimizing the oxygen reduction reaction: A comparative study of different synthesis approaches for Pt_xCo_{1-x} alloys

Room : Salon 301

Chaired by: Erik Kjeang and Robert Slade

09:40 to 10:00

Mitsuharu Chisaka (Department of Electronics and Information Technology, Hirosaki University, Hirosaki, Japan), Tomohiro Iijima, Yuki Ishihara, Yuta Suzuki, Ryoji Inada, Yoji Sakurai

Carbon catalyst codoped with boron and nitrogen for oxygen reduction reaction in acid media

10:00 to 10:20

Eneli Härk (Institute of Chemistry, Tartu University, Tartu, Estonia), Vahur Steinberg, Jaak Nerut, Silver Sepp, Kersti Vaarmets, Enn Lust

Impact of the Various Micromesoporous Derived Carbon Supports to the Slow Oxygen Reduction Reaction Kinetics Before and After the Modification

10:20 to 10:40

Coffee Break

10:40 to 11:00

Nicolas Alonso-Vante (IC2MP CNRS UMR 7285, University of Poitiers, Poitiers, France), Jiwei Ma, Aurélien Habrioux, Guadalupe Ramos-Sanchez, Claudia Morais, Perla Balbuena

Probing the Interaction Between Platinum Nanoparticles and Graphitic Domains of Carbon

11:00 to 11:20

Xenia Tuaev (Department of Science and Technology, University of Twente, Enschede, Netherlands), Stefan Rudi, Peter Strasser

The Impact of Carbon Support on Activity and Stability of Pt Nanoparticle Fuel Cell Catalysts: an *in situ* Study

11:20 to 11:40 **ISE Prize for Applied Electrochemistry**

Karl Mayrhofer (Department of Interface Chemistry and Surface Engineering, Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany)

Stability of Electrocatalysts for Electrochemical Energy Conversion

Symposium 5: Corrosion Processes at the Nanoscale

Room : Constitucion

Chaired by: Nick Birbilis and Jorge Uruchurtu

09:40 to 10:00

Jorge Alberto Ramírez Cano (Department of Applied Physics, CINVESTAV, Mérida, Mexico), Lucien Veleva, Gabriel Trejo Córdoba, Gloria Bolio

Adsorption of mercaptobenzothiazole and benzothiazole onto copper surface

10:00 to 10:20

Jesica De Leon Almaguer (Department of Materials, Universidad Autonoma de Nuevo Leon, San Nicolas de Los Garza, Mexico)

Flow-Induced Corrosion of API X65 Pipeline Steel in a CO_2 Saturated Brine

10:20 to 10:40

Coffee Break

10:40 to 11:00

Bernard Tribollet (LISE UPR 15 CNRS, University Pierre et Marie Curie, Paris, France), Blanca Torres Bautista, Maria Carvalho, Isabelle Frateur

Copper Alloys at the Corrosion Potential in Seawater

11:00 to 11:20

Carlos Vazquez (Facultad de Ingeniería Mecánica y Eléctrica, Universidad Autónoma de Nuevo León, San Nicolás de Los Garza, Mexico), Facundo Almeraya

Characterization of corrosion behavior of painted galvanized steel under different conditions

11:20 to 11:40

Mayra Luna Trujillo (Departamento de Ingeniería en Metalurgia y Materiales, Instituto Politécnico Nacional, ESIQIE, Distrito Federal, Mexico), Elsa Miriam Arce Estrada, Claudia Ramírez, Jorge Guadalupe López Valdez

Efficiency of 2-butyne-1,4-diol as inhibitor corrosion of API-X52 carbon steel in acidic environments

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Gerko Oskam and Enn Lust

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

Enn Lust (Institute of Chemistry, University of Tartu, Tartu, Estonia), Eneli Härk, Kersti Vaarmets, Jaak Nerut, Silver Sepp, Vahur Steinberg, Jaanus Eskusson, Indrek Tallo, Heisi Kurig, Thomas Thomberg

Pt and Pt-Ru Nanocluster Activated Carbide-derived Carbon Based Catalysts for PEM

10:20 to 10:40

Coffee Break

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

Anthony O'Mullane (School of Applied Sciences, RMIT University, Melbourne, Australia), Blake Plowman, Ilija Najdovski, Andrew Pearson

Electroless Decoration of Surface Active Sites as a Route to Bimetallic Surfaces and its Implications for Electrocatalytic Reactions

11:00 to 11:20

Elzbieta Frackowiak (Faculty of Chemical Technology, Poznan University of Technology, Poznan, Poland), Jakub Menzel, Krzysztof Fic

Pseudocapacitive Materials for Energy Storage

11:20 to 11:40

Csaba Janaky (Department of Physical Chemistry and Materials Science, University of Szeged, Szeged, Hungary), Krishnan Rajeshwar, Wilaiwan Chanmanee

Energy Applications of Nanoscale Hybrid Assemblies Based on Oxide Semiconductors

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Philippe Mandin and Celestino Odín Rodríguez Nava

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

José M. Bisang (PRELINE, Facultad de Ingeniería Química, Universidad Nacional del Litoral, Santa Fe, Argentina)

Design of Electrochemical Reactors for Wastewater Treatment

10:00 to 10:20

Emigdia Guadalupe Sumbarda Ramos (Department of Electroquímica, Centro de Graduados del Instituto Tecnológico de Tijuana, Tijuana, Mexico), Mercedes Teresita Oropeza Guzmán, Rodolfo Salgado Rodriguez, Maura María Margarita Teutli León, Bayardo Murilllo Rivera, Ignacio González

Electrolyte selection for electrokinetic extraction of metallic pollutant

10:20 to 10:40

Coffee Break

10:40 to 11:00

Tsuyoshi Hoshino (Fusion Research and Development Directorate, Japan Atomic Energy Agency, Omotedate, Rokkasho-mura, Japan)

Development of Lithium Resources Recovery from Seawater by Electrodialysis using Novel Ionic Membrane

11:00 to 11:20

Stefano Freguia (Advanced Water Management Centre, The University of Queensland, Brisbane, Australia), Elena Mejia Likosova, Jurg Keller

Electrochemical recovery of iron from mackinawite formed in sewer systems

Symposium 9: Electrochemistry in the Mining Industry: Fundamentals, Mineral Processing, Metal Recovery and Environmental Issues

Room : Salon 303

Chaired by: Roel Roel Cruz

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

Michael L. Free (Department of Metallurgical Engineering, University of Utah, Salt Lake, USA)

Production of High Quality Metals from Minerals Through Controlled and Sustainable Electrochemistry

10:20 to 10:40

Coffee Break

10:40 to 11:00

Alejandro Recéndiz (Metallurgical Processes, CIDT - Servicios Administrativos Peñoles, Torreon, Mexico), Isaías Almaguer, Ricardo Benavides

Electrochemical Study of the Electro-deposition of Silver and the Tellurium Effect on the Cathodic Potential

11:00 to 11:20

Yuji Yamada (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Tian Zhang, Masatsugu Morimitsu

A Novel Copper Electrowinning Anode Using Amorphous RuO_2-Ta_2

11:20 to 11:40

German Orozco (Department of Electrochemistry, CIDETEQ, Queretaro, Mexico), Juan Carlos Olvera, Raul Garcia, Jouse Jonathan Machorro

Electrodialysis of Merchant-Grade Phosphoric Acid

Symposium 10: Molecular and Computational Electrochemistry of Molecules with Biological and Pharmacological Activity

Room : Salon 304

Chaired by: Marilia Goulart

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

Francesco Paolucci (Department of Chemistry G. Ciamician, Alma Mater Studiorum University of Bologna, Bologna, Italy), Silvana Fiorito, Emmanuel Flahaut, Massimo Marcaccio, Giovanni Valenti, Stefania Rapino

Redox Properties of Carbon Nanostructures and Their Biological Effects

10:00 to 10:20

José Zagal (Department of Chemistry of Materials, University of Santiago, Santiago, Chile)

Matching the M(II)/(I) (M= Fe, Co) formal potential of Surface Confined M-N4-Macrocyclics to the reversible potential of the L-cystine/L-cysteine Couple for Maximum Catalytic Activity for the Oxidation of L-Cysteine and other thiols

10:20 to 10:40

Coffee Break

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

Susana Cordoba de Torresi (Instituto de Quimica, Universidade de São Paulo, São Paulo, Brazil), Suelen Takahashi, Tatiana Augusto, Marco Antonio Minadeo, Paula Montoya

Electroactive polymers for biomedical applications: Drug release and cell viability

11:20 to 11:40

Carlos Frontana (Electrochemistry, CIDETEQ, Pedro Escobedo, Mexico), Georgina Armendariz-Vidales, Eduardo Martinez, Rutely Burgos-Castillo, Lindsay S. Hernandez-Muñoz, Antônio Albuquerque de Souza, Fabiane Caxico de Abreu, Eufrânio N. da Silva Júnior, Emilay B. T. Diogo, Marilia Goulart

Discerning Between Homogeneous and Heterogeneous Electron Transfer on the Formation of Biradical Dianion Species in Nor-Beta-Lapachones Containing Nitro Groups

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface

Room : Salon 308

Chaired by: Marc Koper

09:40 to 10:00

Serhiy Cherevko (Interface Chemistry and Surface Engineering, Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), Angel A. Topalov, Aleksandar R. Zeradjanin, Ioannis Katsounaros, Karl Mayrhofer

Dissolution of Metals - Benchmarking Stability for Electrocatalytic Water Oxidation

10:00 to 10:20

Juan M. Feliu (Department of Quimica Fisica, University of Alicante, Alicante, Spain), Elton Sitta, Ana M. Gomez-Marin

Structure Sensitivity of Hydrogen Peroxide Oxidation and Reduction Reactions

10:20 to 10:40

Coffee Break

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

Gregory Jerkiewicz (Department of Chemistry, Queens University, Kingston, Canada), Liyan Xing, M. Akhtar Hossain, Diane Beauchemin, Mohammad Alsabet, Michal Grden, Kev T. Adjemian

Platinum Electro-Dissolution during Surface Oxide Formation and Reduction

11:20 to 11:40

Paolo Malacrida (Department of Physics, Technical University of Denmark, Copenhagen, Denmark), Maria Escudero-Escribano, Arnau Verdaguer-Casadevall, Ulrik Grønbjerg, Jan Rossmeisl, Jakob Schiøtz, Ifan Stephens, Ib Chorkendorff

Pt-La and Pt-Ce alloys for oxygen reduction: Relating surface composition to the enhanced activity and stability

Symposium 13: Education in Electrochemistry

Room : Salon 302

Chaired by: Jorge Ibanez

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

Jeffrey Fergus (Materials Engineering, Auburn University, Auburn, USA)

Challenges and Opportunities in Preparing Scientists and Engineers for Work in Electrochemical Science and Technology

10:20 to 10:40

Coffee Break

10:40 to 11:20

Krishnan Rajeshwar (Department of Chemistry & Biochemistry, University of Texas at Arlington, Arlington, USA)

Electrochemistry & Photoelectrochemistry for Environmental Remediation: Some Concepts and Misconceptions

11:20 to 11:40

Eric Vieil (LEPMI, Grenoble University and CNRS, Saint Martin d'Hères, France)

Simplifying Fundamental Electrochemistry Using the Cross-disciplinary Approach of Formal Graphs

Thursday 12 September 2013 - Afternoon

Symposium 2: Sensing in Living Systems

Room : Salon 307

Chaired by: Stéphane Arbault and Xochitl Dominguez-Benetton

14:20 to 14:40

David Evrard (Laboratoire de Génie Chimique (UMR UPS/CNRS/INP 5503), Université Paul Sabatier – Toulouse III, Toulouse, France), William Richard, Pierre Gros

Co-electrodeposition of PEDOT and thiophenylbenzene diazonium: En route towards improved lifetime and reliability of an antioxidative compounds sensor

14:40 to 15:00

Maritza Páez (Department of Materials Chemistry, Universidad de Santiago de Chile, Santiago, Chile), Baeza Sebastián, Azócar Manuel I., Gulppi Miguel, Melo Francisco, Véjar Nelson, Monsalve Alberto, Juan Pérez, Vásquez Claudio, Pavez Jorge, Zagal José H.

Understanding the phenomenon of biocorrosion in a stainless steel 316 L

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

Hanna Ayoub (Department of Develoment, Impeto Medical, Paris, France), Virginie Lair, Sophie Griveau, Amandine Calmet, Philippe Brunswick, Fethi Bedioui, Michel Cassir

Electrochemical characterization of electrode materials of sensor device for early diagnosis of sudomotor dysfunction

15:20 to 15:40

Sven Verguts (Research Group Electrochemical and Surface Engineering, Vrije Universiteit Brussel, Brussels, Belgium), Yves Van Ingelgem, Annick Hubin

Kinetic investigation of the Ferricyanide / Ferrocyanide redox system for bioelectrochemical studies

15:40 to 16:00

Chifundo Ntola (Department of Chemistry, Durham University, Durham, United Kingdom), Ritu Kataky

Novel Bio-Inspired Sensory Material for Implantable Tissue Application

16:00 to 16:20

Mónica Bravo-Anaya (Ingeniería Química, Universidad de Guadalajara, Guadalajara, Mexico), J.F.A. Soltero, E. R. Macías, N. Casillas, V.V. Fernández Escamilla, F. Carvajal Ramos, E.R. Larios-Duran

The Scaling of Electrochemical Parameters of DNA Aqueous Solutions with Concentration and Temperature Through an EIS Study

16:20 to 16:40

Coffee Break

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

Abraham Esteve-Núñez (Department of Chemical Engineering, University of Alcalá, Madrid, Spain)

Microbial exocellular electron transfer: The art of deconstructed microbial redox cuisin

17:20 to 17:40

Cesar Torres (Swette Center for Environmental Biotechnology, Arizona State University, Tempe, USA), Oluyomi Ajulo, Rachel Yoho, Sudeep Popat

Electrochemical characterization reveals parallel electron-transport processes in Geobacter sulfurreducens

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

Bernardino Virdis (Advanced Water Management Centre, The University of Queensland, Brisbane, Australia), Bogdan Donose, Damien Batstone

Application of Resonance Raman Microscopy to the Investigation of Electrode-reducing Microbial Biofilms

18:00 to 18:20

Yige Zhou (Department of Pharmaceutical Sciences, University of Toronto, Toronto, Canada)

Ultrasensitive Nanosensors for the Detection of Cancer Biomarkers

Symposium 4a: Novel Materials and Devices for Energy Storage and Conversion: Electrochemical Capacitors

Room : Salon 306

Chaired by: George Zheng Chen

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

Heather A. Andreas (Department of Chemistry, Dalhousie University, Halifax, Canada), Alicia Oickle, Yaohui Wang

Understanding Energy Loss in Electrochemical Capacitors During Storage

15:00 to 15:20

Andrew Burke (Institute of Transportation Studies, University of California, Davis, USA)

Performance of advanced electrochemical capacitors of carbon/carbon and hybrid technologies

15:20 to 15:40

Katja Pinkert (Institute for Complex Materials, Leibniz Institute for Solid State and Materials Research, Dresden, Germany), Lars Giebeler, Markus Klose, Markus Herklotz, Steffen Oswald, Jürgen Thomas, Stefan Kaskel, Jürgen Eckert

High Energy Supercapacitor Electrode Materials: Synthesis and Nanostructure Analysis

15:40 to 16:00

Grzegorz Lota (Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznan, Poland), Mikolaj Meller, Fernand Gauthy, Philippe Degee, Krzysztof Fic, Elzbieta Frackowiak

The Influence of Graphite Electrode on Electrochemical Performance of High Energy Supercapacitors

16:00 to 16:20

Dominic Rochefort (Department of Chemistry, Université de Montréal, Montréal, Canada), Ngoc Long Nguyen

Electrochemistry of RuO_2 electrodes in protic ionic liquids: Limits and benefits of pseudocapacitors using non-aqueous electrolytes

16:20 to 16:40

Coffee Break

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

Masayuki Morita (Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Kazuki Furukawa, Nobuko Yoshimoto, Minato Egashira

Compatibility of Current-collecting Metal Substrates with Organic Electrolyte Solutions in Hybrid Electrochemical Capacitors

17:20 to 17:40

Robert Slade (Department of Chemistry, University of Surrey, Guildford, United Kingdom), Alexander Roberts

Aqueous Supercapacitors for Extreme Climatic Low Temperatures

17:40 to 18:00

Alar Jänes (Institute of Chemistry, University of Tartu, Tartu, Estonia), Thomas Thomberg, Jaanus Eskusson, Enn Lust

Fluoroethylene Carbonate - Propylene Carbonate Solvent Mixtures for Wide Temperature Operating Supercapacitors

18:00 to 18:20

Suk Woo Lee (Department of Materials Science and Engineering, Yonsei University, Seoul, Korea), Seong Min Bak, Chang Wook Lee

A Comparative Study on Carbon Structure of Reduced Graphene Oxide According to MnO_2 Deposition Method

18:20 to 18:40

Pei Kang Shen (Department of Physics and Engineering, Sun Yat-sen University, Guangzhou, China), Yunyong Li

Three-dimensional Hierarchical Porous Graphene-like Networks for Fast and Highly Stable Supercapacitors

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Riccardo Ruffo and Eduardo Sanchez

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

Arnaldo Visintin (INIFTA, Universidad Nacional de La Plata, La Plata, Argentina), Jorge Thomas

Synthesis and Performance of $LiFePO_4$/C and Carbon Fibre Composite as Cathodes in Lithium-ion Batteries

14:40 to 15:00

Myeongseong Kim (Department of Materials Science and Engineering, Yonsei University, Seoul, Korea), Jong-Pil Jegal

Microwave-assisted hydrothermal synthesis of micro-sized spherical $LiMn_{1-x}Fe_xPO_4$ for high rate cathode materials

15:00 to 15:20

Jie Li (MEET Battery Research Center, University of Muenster, Muenster, Germany), Xin He

Synthesis and characterization of cathode material $Li[Li_{0.2}Mn_{0.56}Ni_{0.16}Co_{0.08}]O_2$ with hollow spherical structure

15:20 to 15:40

Yuki Maruyama (Department of Materials Science and Technology, Nagaoka University of Technology, Niigata, Japan), Omar Mendoza, Hiroaki Ishikawa, Yoshitsuge Sone, Minoru Umeda

Electrochemical Degradation Behavior of $LiCoO_2$ and $LiMn_2O_4$ Cathode Materials Used in Li-ion Cells

15:40 to 16:00

Omar Mendoza (Department of Materials Science and Technology, Nagaoka University of Technology, Niigata, Japan), Yuki Maruyama, Hiroaki Ishikawa, Yoshitsuge Sone, Minoru Umeda

Evaluation of Different Cathode Materials Used in Li-ion Cells Incorporating Reference Electrode

16:00 to 16:20

Yi-Hsiu Chen (Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Yun-Sheng Ye, Han-Ping Tseng, Wei-nien Su, Ming-Yao Cheng, Bing Joe Hwang

A Novel Surface Modification Method to Fabricate Silicon/graphene Nanocomposite as Anode Material in Lithium-ion Battery

16:20 to 16:40

Coffee Break

16:40 to 17:00

Junhui Jeong (Department of Materials Science and Engineering, Yonsei University, Seoul, Korea), Hyunkyung Kim, Heechang Youn

Graphene Wrapped $Li_4Ti_5O_{12}$ as Anode Materials for High Rate Lithium Ion Battery

17:00 to 17:20

Chao-Yen Kuo (Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Bing Joe Hwang

Transition Metal-doped Titanium Oxide as a Potential Anode in Lithium Ion Batteries

17:20 to 17:40

Jing Li (Pen-Tung Sah Institute of Micro-Nano Science and Technology, Xiamen University, Xiamen, China), Chuang Yue, Yingjian Yu, Jun Yin

Fabrication of 3D Si-based Core/shell Nanocomposite Arrays as Anode Material in Micro-Lithium-Ion-Batteries

17:40 to 18:00

Jie Liu (Department of Chemistry, Xiamen University, Xiamen, China), Qian Zhang, Jun-Tao Li, Ling Huang, Shi-Gang Sun

A Composite of Nanosized Si Embedded in Carbon Matrix and Its Enhanced Electrochemical Performance as Anode of Lithium-ion Battery

Room : Salon 301

Chaired by: Dora Nava and Enrique Quiroga-González

14:20 to 14:40

Roberto Torresi (Instituto de Quimica, Universidade de São Paulo, São Paulo, Brazil), Nedher Sanchez Ramirez

Transport Properties of Tetracyanoborate Anion Based Ionic Liquids

14:40 to 15:00

Heechang Youn (Department of Material Science and Engineering, Yonsei University, Seoul, Korea)

Nano-sized Sulfur/Graphene Composites for Lithium-Sulfur Batteries

15:00 to 15:20

Kenneth Ozoemena (Energy Materials, Materials Science and Manufacturing, CSIR, Pretoria, South Africa), Charl Jafta, Mkhulu Mathe

Controlling the Degree Disorder in $LiMn_{1.5}Ni_{0.5}O_4$ Spinel via Microwave Irradiation

15:20 to 15:40

Elie Paillard (Department of Chemistry, Institute of Physical Chemistry-MEET, Muenster, Germany), Lorenzo Grande, Stephan Koch, Jan von Zamory, Anders Oche, Stefano Passerini

Investigation of the Lithium/Ionic Liquid-Based Electrolyte Interface for Li-Metal Batteries

15:40 to 16:00

Edgar Ventosa (Department of Analytical Chemistry, University of Bochum, Bochum, Germany), Wei Xia, Peirong Chen, Bastian Mei, Martin Muhler, Wolfgang Schuhmann

Strategies to improve the performance of TiO_2 as negative electrode material

16:00 to 16:20

Homero Castaneda (Chemical and Biomolecular Engineering, The University of Akron, Akron, USA), Omar Rosas, James Saunders

Characterizing Lithium Ion Dendrites Growth with Mesoscale Geometry by Frequency Domain Approach

16:20 to 16:40

Coffee Break

16:40 to 17:00

Fabio La Mantia (Zentrum für Elektrochemie, Ruhr-Universität Bochum, Bochum, Germany), Alberto Battistel, Mauro Pasta

Batteries for lithium recovery from brines

17:00 to 17:20

Lionel Roué (Energy, Materials and Telecommunications (EMT), INRS, Varennes, Canada), Aurelien Etiemble, Alix Tranchot, Pierre-Xavier Thivel, Hassane Idrissi

In-situ Monitoring of the Cracking of Electrode Materials for Ni-MH and Li-ion Batteries by Acoustic Emission

17:20 to 17:40

Omar Rosas (Chemical and Biomolecular Engineering, The University of Akron, Akron, USA), James Saunders, Homero Castaneda

Time Evolution Quantification of the Interfacial Parameters for Lithium Ion Interfaces using Liquid Ions

17:40 to 18:00

Jolanta Swiatowska (Laboratoire de Physico-Chimie des Surfaces (UMR 7045), CNRS, Chimie ParisTech (ENSCP), Paris, France), Catarina Pereira-Nabais, Aurélien Gohiers, Pierre Tran-Van, Sandrina Zanna, Antoine Seyeux, Alexandre Chagnes, Costel-Sorin Cojocaru, Michel Cassir, Philippe Marcus

Influence of cycling on the chemical and morphological modifications of Si nanowires

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Germano Tremiliosi-Filho and Hiroyuki Uchida

14:20 to 14:40

Zhi-You Zhou (Department of Chemistry, Xiamen University, Xiamen, China), Qiang Wang, Ephrem Terefe, Chi Chen, Lin Song, Xia-Ling Wu, Na Tian, Shi-Gang Sun

High-performance FeN_x/C ORR catalyst based on poly-Phenylenediamine

14:40 to 15:00

Minoru Inaba (Department of Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe, Japan), Takashi Okawa, Etsuko Maki, Yuta Ikehata, Takehito Nishikawa, Hideo Daimon

Novel Preparation Methods for Pt-Monolayer Core-Shell Catalysts and Their Activity and Durability in PEFCs

15:00 to 15:20

Hiroyuki Uchida (Clean Energy Research Center, University of Yamanashi, Kofu, Japan), Kazuki Okaya, Hiroshi Yano, Katsuhiko Kakinuma, Masahiro Watanabe

Enhancement in Oxygen Reduction Reaction Activity and Durability at Stabilized Pt Skin-PtCo Alloy Catalysts Supported on Graphitized Carbon Black

15:20 to 15:40

Justis Masa (Department of Analytical Chemistry, Ruhr-Universitaet Bochum, Bochum, Germany), Wei Xia, Anqi Zhao, Zhenyu Sun, Bastian Mei, Martin Muhler, Wolfgang Schuhmann

Influence of trace metal residues on the activity of supposedly metal-free nitrogen modified carbon catalysts for oxygen reduction

15:40 to 16:00

Tatyana Soboleva (R&D, Automotive Fuel Cell Cooperation, Burnaby, Canada), Max Cimenti, Mickey Tam, Jasna Jankovic, Darija Susac, Juergen Stumper

Toward rational design of the cathode catalyst layer in the PEM fuel cell

16:00 to 16:20

Maria Escudero-Escribano (Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark), Ulrik Grønbjerg, Paolo Malacrida, Arnau Verdaguer-Casadevall, Jan Rossmeisl, Jakob Schiøtz, Ifan Stephens, Ib Chorkendorff

Trends in the activity and stability of Pt-alloy catalysts for the ORR: A focus on novel alloys of Pt and lanthanides

16:20 to 16:40

Coffee Break

16:40 to 17:00

Selvarani Ganesan (Department of Chemical Engineering & Materials Science, Michigan State University, East Lansing, USA), Nathaniel Leonard, Scott Barton

The role of transition metals and their quantitative estimation in Metal-Nitrogen-Carbon based catalyst for oxygen reduction reaction

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Mario Alpuche-Aviles and Marina Rincón-González

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

Daniel Bélanger (Department of Chemistry, Université du Québec à Montréal, Montréal, Canada)

New approaches for modification of materials by the diazonium chemistry

15:00 to 15:20

David Cedillo (Department of Materials, Universidad Autonoma de Nuevo León, San Nicolás, Mexico), Ulises Matias Garcia Perez

Synthesis of $AgVO_3$ via co-precipitation method, characterization and evaluation of its photocatalytic properties for degradation of dyes

15:20 to 15:40

Mario Alpuche-Aviles (Department of Chemistry, University of Nevada, Reno, USA), Ashantha Fernando, Suman Parajuli

Stochastic Interactions between Electrodes, Colloidal TiO_2 Nanoparticles and Aggregates

15:40 to 16:00

Matthew Gustafson (Department of Chemistry, Monash University, Melbourne, Australia), Noel Clark, Kei Matsumoto, Toshiyuki Itoh, Bjorn Winther-Jensen, Douglas R. MacFarlane

Photostimulated Bulk Heterojunction Materials for Electrocatalytic Reactions

16:00 to 16:20

Lourdes Vázquez-Gómez (Institute for Energetics and Interphases, National Research Council of Italy (CNR), Padova, Italy), Stefano Cimino, Marco Musiani, Enrico Verlato

Preparation and Electrochemical Characterization of Noble Metal Modified Fe-Cr-Al Alloy Foam Catalysts for High-Temperature Oxidation Reactions

16:20 to 16:40

Coffee Break

Chaired by: Daniel Bélanger

16:40 to 17:00

Rosalba Rincón (Analytische Chemie - Elektroanalytik & Sensorik, Ruhr-Universität Bochum, Bochum, Germany), Edgar Ventosa, Michaela Nebel, Frank Tietz, Wolfgang Schuhmann

Perovskites as Oxygen Evolution Electrocatalysts. Electrochemical Kinetic Evaluation in Recessed Gold Microelectrodes

17:00 to 17:20

Karen María Cecilia Vega Sixtos (Department of Energías Renovables, Universidad Autónoma de Nuevo León, San Nicolás de Los Garza, Mexico), Ulises Matias Garcia Perez, Patricia Zambrano, Facundo Almeraya, Bárbara Bermúdez Reyes

Free-additive co-precipitation synthesis and visible light photocatalytic activities of Bi_2WO_6 powders

17:20 to 17:40

Simonetta Palmas (Department of Mechanical Chemical and Material Engineering, University of Cagliari, Cagliari, Italy), Michele Mascia, Annalisa Vacca, Simone Rizzardini, Laura Mais, Isabella Nova, Roberto Matarrese

PANI/TiO_2 NT composite electrodes for possible applications in advanced energy conversion and storage devices

Symposium 8: Electrochemical Engineering for Green Processing

Room : Salon 305

Chaired by: Jose Nava and José M. Bisang

14:20 to 14:40

Lucía Alvarado (Department of Engineering of Minerals, Instituto de Metalurgia, UASLP, San Luis Potosí, Mexico), Israel Rodríguez Torres

Ionic conductivity changes in the resin bed by conditioning effect in an Electrodeionization system

14:40 to 15:00

Hyunseok Kim (Energy Lab., Samsung Advanced Institute of Technology, Samsung Electronics Co., Ltd., Yongin-si, Korea), Joonseon Jeong, Myungdong Cho, Dahye Park, Hyorang Kang

Capacitive Deionization with Ion Exchange Spacer for High Purity Water Treatment

15:00 to 15:20

Mercedes Teresita Oropeza Guzmán (CIDETEQ, Tijuana, Mexico), Eduardo Lopez-Maldonado, Emigdia Guadalupe Sumbarda Ramos, Rosalina Perez-Garcia, Edgar Butron-Vargas, Angelica Gonzalez-Armenta, Jan Talbot

Zeta Potential as a Powerful Tool for Friendly Environmental Processes

15:20 to 15:40

Silvia Gelover (Department of Water Quality and Water Treatment, Mexican Institute of Water Technology, Jiutepec, Mexico), Sara Pérez, Alejandra Martín

Designing Electrocoagulation Reactors for Silica Removal

15:40 to 16:00

Armando Isael Vázquez Aranda (Instituto de Metalurgia, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico), María Isabel Lázaro Báez, José Luis Nava Montes de Oca, Israel Rodríguez Torres

Effect of primary potential and current distribution on the electrochemical generation of H_2O_2

16:00 to 16:20

Eligio Rivero (Engineering and Technology, Universidad Nacional Autónoma de México-FES Cuautitlán, Cuautitlán Izcalli, Mexico), Enrique García-Santiago, Martin Cruz-Diaz, Francisco Almazán, Ignacio González

Hydrodynamic and Mass Transport CFD Simulations Under Charge and Mass Transfer Mixed Control

16:20 to 16:40

Coffee Break

16:40 to 17:00

Tzayam Perez (Department of Ingenieria Geomatica e Hidraulica, Universidad de Guanajuato, Guanajuato, Mexico)

Numerical simulation of current distribution along the boron-doped diamond anode of a filter-press-type FM01-LC reactor during the oxidation of water

17:00 to 17:20

Jose Nava (Department of Ingenieria Geomatica e Hidraulica, Universidad de Guanajuato, Guanajuato, Mexico)

Numerical simulation of the primary, secondary and tertiary current distributions on the cathode of a rotating cylinder electrode cell. Influence of using plates and concentric cylinder as counter electrodes

17:20 to 17:40

Philippe Mandin (Laboratoire d'Ingenierie des Materiaux de Bretagne (LIMATB), Université de Bretagne Sud, Lorient, France), Zine Derhoumi, Herve Roustan

Bubble over voltage modelling during two-phase electrolysis. Experimental & numerical Study

Symposium 9: Electrochemistry in the Mining Industry: Fundamentals, Mineral Processing, Metal Recovery and Environmental Issues

Room : Salon 303

Chaired by: Alain Walcarius and Edouard Asselin

14:20 to 14:40

Alejandro Alonso (Department of Energy, Universidad Autonoma Metropolitana, Mexico City, Mexico), Rosa Luna, Gretchen Lapidus

Gold and Silver Anodic Electrodeposition from Thiosulfate Solutions

14:40 to 15:00

Tian Zhang (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Masatsugu Morimitsu

Amorphous RuO_2-Ta_2O_5/Ti Anode for Oxygen Evolution: Voltage Reduction and Durability for Electrowinning

15:00 to 15:20

Lydia Moron (Department of Minerals Engineering, Metallurgy Institute, UASLP, SLP, Mexico), Jose Angel Gasca, Roel Cruz, Israel Rodriguez, Isabel Lazaro

A hydrometallurgical route for zinc recovery from EAFD

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

Edouard Asselin (Materials Engineering, The University of British Columbia, Vancouver, Canada)

The Electrochemistry of Chalcopyrite: A Review

15:40 to 16:00

Joaquin Solis-Marcial (Department of Cinecias Basicas e Ingenieria, Universidad Autonoma Metropolitana, Mexico, Mexico), Gretchen Lapidus

Electrochemical Dissolution Study of Chalcopyrite in Aqueous Alcohols and Organic Acids

16:00 to 16:20

Angel Meléndez (Escuela de Ingeniería Metalúrgica y Ciencia de Materiales, Universidad Industrial de Santander, Bucarmanaga, Colombia), José Antonio Henao, Jairo Alonso Gauta, Fabián Florez

An electrochemical study of metal-deficient layers formed during pyrrhotite oxidation in different acids

16:20 to 16:40

Coffee Break

16:40 to 17:00

Oscar Olvera (Department of Materials Engineering, University of British Columbia, Vancouver, Canada), Luis Quiroz, Edouard Asselin, David Dixon

Effect of Pyrite on the Dissolution of Fresh and Passivated Chalcopyrite Electrodes

17:00 to 17:20

Gustavo Urbano (Instituto de Metalurgia, Universidad Autónoma de San Luís Potosí, San Luís Potosí, Mexico), Isabel Lazaro, Israel Rodriguez, Juan Luis Reyes, Roxana Larios, Roel Cruz

Electrochemical and Spectroscopic Study of Interfacial Interactions between Chalcopyrite and Typical Flotation Process Reagents

17:20 to 17:40

Roel Cruz-Gaona (Instituto de Metalurgia, Universidad Autonoma de San Luis Potosi, San Luis Potosi, Mexico), Edgar David Moreno-Medrano, N. Casillas, E.R. Larios-Duran, R. H. Lara-Castro, M. Bárcena-Soto

EIS Evaluation of Kinetics Parameters for the Anodic Oxidation of Galena in Presence of Xanthate

17:40 to 18:00

Isabel Lazaro (Instituto de Metalurgia, Universidad Autonoma de San Luis Potosi, San Luis Potosi, Mexico)

Effect of impurities on the anodic oxidation behavior of zinc sulfide concentrates

18:00 to 18:20

Rui Kong (Department of Chemical Engineering, University of Florida, Gainesville, USA), Mark Orazem

Semi-Continuous Electrokinetic Dewatering of Phosphate Mine Tailings

Symposium 10: Molecular and Computational Electrochemistry of Molecules with Biological and Pharmacological Activity

Room : Salon 304

Chaired by: Carlos Frontana

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

Ritu Kataky (Department of Chemistry, University of Durham, Durham, United Kingdom), Anna Krol, Rui Campos, Paula Lopes

Electrochemical investigations of lipid membranes, proteins and nanoparticles at the liquid-liquid interface

14:40 to 15:00

Dafne Guzmán (Department of Chemistry, UAM-Iztapalapa, Mexico, Mexico), María-Teresa Ramírez-Silva, Annia Galano, Alberto Rojas-Hernández, Silvia Corona-Avendaño, Mario Romero Romo, Manuel Palomar-Pardavé

Spectro-Electrochemical and Dft Study of Tenoxicam Metabolites Formed by Its Electrochemical Oxidation

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

Frédéric Lemaître (UMR 8640 - Département de Chimie, Ecole Normale Supérieure, Paris, France), Anne Meunier, Ouardane Jouannot, Rémy Fulcrand, François Darchen, Stéphane Arbault, Manon Guille Collignon, Christian Amatore

Investigating Exocytosis at the Single Cell Level – Combination of Amperometry and Total Internal Reflection Fluorescence Microscopy

15:20 to 15:40

Eric Labbe (Department of Chemistry, Ecole Normale Superieure, Paris, France), Olivier Buriez, Pierluca Messina, Elizabeth Hillard, Gerard Jaouen, Anne Vessieres, Christian Amatore

Electrochemistry as a tool to map the oxidative metabolism of ferrocifen anticancer drug candidates

15:40 to 16:00

De-Yin Wu (Department of Chemistry, Xiamen University, Xiamen, China)

Photocatalytic Hydrogen Evolution Reactions of Hydrated Protons on Silver and Gold Cathodes

16:00 to 16:20

Richard Webster (School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, Singapore), Serena Tan

Proton-Coupled Electron Transfer Reactions of Riboflavin (Vitamin B2) and Flavin Mononucleotide (FMN)

16:20 to 16:40

Coffee Break

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

Alberto Credi (Dipartimento di Chimica G. Ciamician, Universita di Bologna, Bologna, Italy), Serena Silvi, Margherita Venturi

Electroactive Molecular Devices and Machines

17:20 to 17:40 **Invited**

Gustavo Adolfo Rivas (Fisicoquímica, Facultad Ciencias Químicas, Universidad Nacional de Córdoba, Córdoba, Argentina), Nancy Fabiana Ferreyra, Marcela Rodríguez, María Rubianes, María Pedano, Guillermina Luque, Fabiana Gutierrez, Aurelien Gasnier, Pablo Dalmasso, Emiliano Primo, Yamile Jalit, Fausto Comba, Victoria Bracamonte, Marcos Eguilaz Rubio

Biological molecules, nanomaterials and electrochemical transducers…a succcessful blend for the development of (bio)sensing strategies

17:40 to 18:00

Manuela Rueda (Department of Physiscal Chemistry, University of Seville, Seville, Spain), Francisco Prieto, Julia Alvarez, Antonio Rodes

FT-IR Spectroelectrochemical Studies of Adenine Adsorption on Gold Electrodes: Acid-base Properties and Interactions with Thymine

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface

Room : Salon 308

Chaired by: Andrew Gewirth and Gregory Jerkiewicz

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

Jonah Erlebacher (Department of Materials Science and Engineering, Johns Hopkins University, Baltimore, USA), Ellen Benn

Electrochemistry at Nanoporous Metal/Ionic Liquid Composite Electrodes

14:40 to 15:00

Stanko Brankovic (Department of Electrical and Computer Engineering, University of Houston, Houston, USA), Qiyui Yuan, Lars Grabow

Underpotential Deposition on Submonolayer Modified Au(111) – The Prelude to Synthesis of True Bi-functional Monolayer Catalysts

15:00 to 15:40 **Keynote**

Anthony Kucernak (Department of Chemistry, Imperial College London, London, United Kingdom), Christopher Zalitis, Denis Kramer

Beyond the RDE: A new technique to measure platinum electrocatalyst performance at low loading and high reactant mass transport

15:40 to 16:00

Helmut Baltruschat (Inst. of Physical Chemistry, University of Bonn, Bonn, Germany), Shahid Iqbal, Christoph Molls, Hatem Abdelhalim

O_2 Reduction and Evolution at Chalcogenide Surfaces: STM and Isotopic Exchange

16:00 to 16:20

Anna Zalineeva (IC2MP, University of Poitiers, Poitiers, France), Stève Baranton, Gregory Jerkiewicz

Electrochemical behavior of un-supported preferentially-shaped palladium nanoparticles

16:20 to 16:40

Coffee Break

16:40 to 17:00

Petr Krtil (Department of of Electrocatalysis, J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Hana Hoffmannova, Kei-ichiro Murai, Maki Okube, Valery Petrykin, Timo Jacob

Surface Segregation of Pt-based Nanoparticulate Electrocatalysts

17:00 to 17:20

Jie Ren (Department of Chemistry, Xiamen University, Xiamen, China), Zhi-You Zhou, Shi-Gang Sun

H-D Kinetic Isotope Effect of Ethanol Electrooxidation on Precious Metal Electrodes

17:20 to 17:40

Diego Alfonso Crespo-Yapur (Université de Strasbourg, Strasbourg, France), Antoine Bonnefont, Rolf Schuster, Elena R. Savinova, Katharina Krischer

Influence of the nature and concentration of the supporting electrolyte on the cooperative behavior of Pt microelectrodes during CO electrooxidation

17:40 to 18:00

Ifan E.L. Stephens (Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark), Arnau Verdaguer-Casadevall, Samira Siahrostami, Mohammadreza Karamad, Paolo Malacrida, Davide Deiana, Björn Wickman, Maria Escudero-Escribano, Thomas Hansen, Ib Chorkendorff, Jan Rossmeisl

Enabling Direct H_2O_2 Production via Rational Electrocatalyst Design

18:00 to 18:20 **Invited**

Piotr Zelenay (Materials Physics and Applications, Los Alamos National Laboratory, Los Alamos, USA), Hoon T. Chung, Qing Li, Geraldine M. Purdy, Gang Wu

Advantages and Limitations of Non-Precious Metal ORR Catalysts in Various Environments

Symposium 13: Education in Electrochemistry

Room : Salon 302

Chaired by: Gerardine Botte

14:20 to 15:00 **Invited**

Christopher Brett (Departamento de Quimica, Universidade de Coimbra, Coimbra, Portugal)

The Role, Importance and Challenges of Electrochemistry Education in the 21st Century

15:00 to 15:40

Mark Orazem (Department of Chemical Engineering, University of Florida, Gainesville, USA), Bernard Tribollet

Teaching Electrochemical Impedance Spectroscopy

15:40 to 16:20

Carlos Ponce de Leon (Faculty of Engineering and the Environment, University of Southampton, Southampton, United Kingdom), Frank Walsh

Approaches to the teaching of electrochemical engineering

16:20 to 16:40

Coffee Break

16:40 to 17:20

Juan Genesca (Department of Metallurgical Engineering, Universidad Nacional Autonoma Mexico, UNAM, Mexico D.F., Mexico)

Opportunities and Challenges in Corrosion Education

17:20 to 17:40

Jose Solla-Gullon (Institute of Electrochemistry, University of Alicante, Alicante, Spain), Francisco J. Vidal-Iglesias, Vicente Montiel, Antonio Aldaz

An Easy Method for Calculating Kinetic Parameters of Electrochemical Mechanisms

17:40 to 18:20

Alanah Fitch (Department of Chemistry and Biochemistry, Loyola University Chicago, Chicago, USA), Mary van Opstal, Anna Weiss, Matthew Reichert

Electrochemistry in Advanced Chemical Analysis

Friday 13 September 2013

ROOM	Auditorium	Hall C	Hall D	Salon 301	Salon 302	Salon 303	Salon 304	Salon 305	Salon 306	Salon 307	Salon 308	Constitución
08:30 -09:30	**Plenary Lecture** Fritz Scholz											
	Symposium 4c	**Symposium 4b**	**Symposium 6**	**Symposium 4c**	**Symposium 13**	**Symposium 9**	**Symposium 7**	**Symposium 8**	**Symposium 4a**	**Symposium 2**	**Symposium 12**	**Symposium 5**
09:40 - 10:00	E. A. Ticianelli	R. Ruffo	J. Gasiorowski		G. Botte	D. Bevilaqua	J. Van Drunen		A. K. Cuentas	Hitoshi Shiku	G. Valenti	
10:00 - 10:20	S. Sepp		A. Pailleret		C. Bell		C. Kvarnstrom		K. Fic		S. Mukerjee	
10:20 - 10:40	Coffee Break											
10:40 - 11:00	Xia Sheng	E. Quiroga-G.	S. Ahmad		J. Ibanez	I. Lopez	J. Mostany		A. Laheäär	Zhifeng Ding	J. Lipkowski	
11:00 - 11:20	K. Vaarmets	Liang-Yin Kuo				A. Soria Flores			M. Meller	M. Gómez-M.	K. Uosaki	
11:20 - 11:40		M. Zier	M. Ogunlesi			R. H. Lara C.	S. K. Guin		Sanghoon Park	S. Arbault	R. Hillman	
11:40 - 12:00			T. Benedetti			T. Vargas	M. Nahra		J. Marsalek	B. Piro	Ken-ichi Fukui	
12:00 - 12:20			S. Kazim						T. Thomberg			
12:30 - 12:45	Closing Ceremony											

Friday 13, September 2013 - Morning

Plenary Lecture

Room : Auditorium

Chaired by: Felipe González, CINVESTAV-México

08:30 to 09:30

Fritz Scholz (Institute of Biochemistry, University of Greifswald, Greifswald, Germany)

The interaction of free oxygen radicals with electrode surfaces

Symposium 2: Sensing in Living Systems

Room : Salon 307

Chaired by: Susana Torresi

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

Hitoshi Shiku (WPI-Advanced Institute for Materials Research, Tohoku University, Japan), Hitoshi Shiku, Kosuke Ino, Tomokazu Matsue

Electrochemical Evaluation of Differentiation Status of Mouse Embryo Stem Cell

10:20 to 10:40

Coffee Break

Chaired by: Hitoshi Shiku

10:40 to 11:00

Zhifeng Ding (Department of Chemistry, The University of Western Ontario, London, Canada)

Cisplatin-induced permeability change of single live human bladder cancer cells revealed by scanning electrochemical microscopy

11:00 to 11:20

Maria Gómez-Mingot (Department of Physical Chemistry and Institute of Electrochemistry, Universidad de Alicante, Alicante, Spain), Sophie Griveau, Fethi Bedioui, Craig Banks, Vicente Montiel, Jesús Iniesta

Designing New Multi-Sensor Electrochemical Devices for Monitoring Biomarkers in Embryo Development

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

Stéphane Arbault (Institute of Molecular Sciences, CNRS UMR 5255, University of Bordeaux, Pessac, France), Salem Ben-Amor, Fadhila Sekli, Jerome Launay, Pierre Temple-Boyer, Serge Bottari, Michel Rigoulet, Anne Devin, Neso Sojic

Electroanalytical Study of the Oxidative Stress/Respiration Balance in Mitochondria

11:40 to 12:00

Benoît Piro (Department of Chemistry, University Paris Diderot, Paris, France), Xue-Feng Wang, Steeve Reisberg, Guillaume Anquetin, Hugues de Rocquiny, Peng Jiang, Qin Wang, Wangsuo Wu, Chang-Zhi Dong, Minh-Chau Pham

General Design of Label-Free and Reagentless Electrochemical Protein Sensors: Application to a Cancer Biomarker, XIAP

Symposium 4a: Novel Materials and Devices for Energy Storage and Conversion: Electrochemical Capacitors

Room : Salon 306

Chaired by: Thierry Brousse

09:40 to 10:00

Ana Karina Cuentas-Gallegos (Materiales Solares, Instituto de Energías Renovables-UNAM, Temixco, Mexico), Hugo Mosqueda, Thierry Brousse, Eduardo Fuentes Quezada, Margarita Miranda-Hernández, Alfredo Silverio Ordeñana Martínez, Dulce Alejandra Baeza Rostro, Rodolfo López Chavez, Daniella Pacheco Catalán, José Martín Baas López

Development of Positive and Negative Electrodes Based on POM-Carbon Nanocomposites for Asymmetric Supercapacitors

10:00 to 10:20

Krzysztof Fic (Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznan, Poland)

Interfacial Phenomena for Capacitive Energy Conversion and Storage

10:20 to 10:40

Coffee Break

10:40 to 11:00

Ann Laheäär (Institute of Chemistry, University of Tartu, Tartu, Estonia), Alar Jänes, Enn Lust

Unconventional Salt for Supercapacitors – Cesium Carborane

11:00 to 11:20

Mikolaj Meller (Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznan, Poland), Grzegorz Lota, Fernand Gauthy, Philippe Degee, Krzysztof Fic, Elzbieta Frackowiak

Optimisation of Activated Carbon Electrode for Hybrid Electrochemical Capacitors

11:20 to 11:40

Sanghoon Park (Department of Materials Science and Engineering, Yonsei University, Seoul, Korea), Seungbeom Yoon, Hyunkyung Kim

Spine-like Carbon Nanostructure for High-performance Supercapacitors

11:40 to 12:00

Jiri Marsalek (Department of Chemical Engineering, Institute of Chemical Technology Prague, Prague, Czech Republic), Romana Fojtikova, Juraj Kosek

Supercapacitors with Electrodes from Nanosized Manganese Oxide Prepared by Electrospraying Method

12:00 to 12:20

Thomas Thomberg (Institute of Chemistry, University of Tartu, Tartu, Estonia), Tauno Tooming, Tavo Romann, Rasmus Palm, Alar Jänes, Enn Lust

Ultra-high rate supercapacitors based on the activated D-glucose derived micro/mesoporous carbon electrodes

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Room : Hall C

Chaired by: Homero Castaneda and Arnaldo Visintin

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

Riccardo Ruffo (Department of Materials Science, University of Milano Bicocca, Milano, Italy)

Beyond lithium ion batteries: Alternative approaches for next generation materials for energy storage

10:20 to 10:40

Coffee Break

10:40 to 11:00

Enrique Quiroga-González (Institute for Materials Science, University of Kiel, Kiel, Germany), Jürgen Carstensen, Markus Hagen, Helmut Föll

Extraordinary Li-Storage Performance of Si Microwire Array Anodes Using Electrolytes for Lithium-Sulfur Batteries

11:00 to 11:20

Liang-Yin Kuo (Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan)

Synthesis of Coral Reef-like SnO_2-embedded Carbon Nanoparticlesgraphene Oxide Layer via Hydrothermal Process

11:20 to 11:40

Martin Zier (Chemistry of Functional Materials, IFW Dresden, Institute for Complex Materials, Dresden, Germany), Frieder Scheiba, Horst Wendrock, Helmut Ehrenberg, Jürgen Eckert

Analysis of the Electrochemical Characteristics of Lithium Deposition and Dissolution on Carbon Based Anodes

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Room : Auditorium

Chaired by: Germano Tremiliosi-Filho and Edson A. Ticianelli

09:40 to 10:00

Edson A. Ticianelli (Departamento de Fisico Quimica, Instituto de Quimica de Sao Carlos, Sao Carlos, Brazil), Waldemir J. Paschoalino

Investigations of the processes involved in the borohydride oxidation in La-Ni-Based Hydrogen Storage Alloys

10:00 to 10:20

Silver Sepp (Institute of Chemistry, University of Tartu, Tartu, Estonia), Jaak Nerut, Eneli Härk, Kersti Vaarmets, Peeter Valk, Enn Lust

Activity of Various Carbide Derived Carbons Towards Oxygen Electroreduction in Acidic Solutions

10:20 to 10:40

Coffee Break

10:40 to 11:00

Xia Sheng (Centr. vr Oppervlaktechemie & Katalyse, KU Leuven, Leuven, Belgium), Nick Daems, Bart Geboes, Tom Breugelmans, Annick Hubin, Ivo Vankelecom, Paolo Pescarmona

Nitrogen-doped ordered mesoporous carbon as electrocatalyst for oxygen reduction reaction

11:00 to 11:20

Kersti Vaarmets (Institute of Chemistry, University of Tartu, Tartu, Estonia), Silver Sepp, Jaak Nerut, Eneli Härk, Enn Lust

Electrochemical and Physical Characterization of Pt-Nanoclusters Modified Carbons Synthesized from Molybdenum Carbide at Different Temperatures

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

Room : Hall D

Chaired by: Shahzada Ahmad and Bernardo Frontana-Uribe and Pawel J. Kulesza

09:40 to 10:00

Jacek Gasiorowski (Linz Institute for Organic Solar Cells, Johannes Kepler University of Linz, Linz, Austria), Kurt Hingerl, Kerstin Oppelt, Christoph Cobet, Niyazi Serdar Sariciftci

Ellipsometric spectroelectrochemistry - An insight in the optical properties of doped organic semiconductors

10:00 to 10:20

Alain Pailleret (LISE (UPR 15 of CNRS), University Pierre and Marie Curie (Paris VI), Paris, France), Chabha Benmouhoub, Abdelaziz Kadri, Claude Deslouis, Claude Gabrielli, Hubert Perrot, Ozlem Sel

Polypyrrole/dodecylsulfate/cerium oxide nanoparticles composite films: from their electrodeposition on iron to their application as protective coatings against corrosion

10:20 to 10:40

Coffee Break

10:40 to 11:20 **Hans-Jürgen Engell Prize**

Shahzada Ahmad (Materials, Abengoa Research, Sevilla, Spain)

Electrical field Assisted Growth of Polymers: Electrode Materials for Energy Applications

11:20 to 11:40

Modupe Ogunlesi (Department of Chemistry, University of Lagos, Lagos, Nigeria), Wesley Okiei, Sulaiman Akanmu

Application of Polyaniline-Modified Electrode for the Electroanalysis of Human Haemoglobins Using Sodium Nitrate as Dopant

11:40 to 12:00

Tânia Benedetti (Chemistry Institute, Universidade de São Paulo, São Paulo, Brazil), Roberto Torresi

EIS studies of ion conduction in poly(ionic liquid) membranes

12:00 to 12:20

Samrana Kazim (Department of Optoelectronic Phenomena and Materials, Institute of Macromolecular Chemistry, ASCR, Prague 6, Czech Republic), Jiri Pfleger, Dmitrij Bondarev, Jiri Vohlidal

Synthesis and Properties of Water Soluble Polythiophene-Metal Nanoparticles Composites: SERS Sensing and Optoelectronics Applications

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Room : Salon 304

Chaired by: Luis H. Mendoza-Huizar

09:40 to 10:00

Julia Van Drunen (Department of Chemistry, Queens University, Kingston, Canada), Brandy Kinkead, Byron D. Gates, Teko W. Napporn

Pt-Modified Ni Foam Electrodes and Their Applications in Electrocatalysis

10:00 to 10:20

Carita Kvarnstrom (Department of Chemistry, University of Turku, Turku, Finland)

Characterization of the electrochemical reduction of graphene oxide by spectroelectrochemistry

10:20 to 10:40

Coffee Break

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

Jorge Mostany (Departamento de Química, Universidad Simón Bolívar, Caracas, Venezuela), Benjamin Scharifker, Manuel Palomar-Pardavé

Extensions of the standard model of the potentiostatic current transient for three-dimensional nucleation and diffusion-controlled growth processes: A review

11:20 to 11:40

Saurav K. Guin (Department of Atomic Energy, Fuel Chemistry Division, Bhabha Atomic Research Centre, Mumbai, India), Suresh Kumar Aggarwal

Electrosynthesis of nanoparticles on template free electrode : Influence of potentiostatic pulse strategy

11:40 to 12:00

Maguy Nahra (LEPMI, INP, Grenoble, France), Eric Chainet, Lenka Svecova

Tantalum Electrodeposition from Room Temperature Ionic Liquids

Symposium 9: Electrochemistry in the Mining Industry: Fundamentals, Mineral Processing, Metal Recovery and Environmental Issues

Room : Salon 303

Chaired by: Tomás Vargas

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

Denise Bevilaqua (Department of Biochemistry and Chemical Technology, UNESP - Universidade Estadual Paulista, Araraquara, Brazil), Patricia Suegama, Assis Benedetti

Bioleaching of copper minerals – Electrochemical aspects

10:20 to 10:40

Coffee Break

10:40 to 11:00

Irene Lopez (Department of Metallurgy, UASLP, San Luis Potosí, Mexico), E.R. Larios-Duran, Viridiana García-Meza

Electrochemical, spectroscopic and microscopic characterization of bacterial biofilm formed on chalcopyrite from pure and mixed cultures

11:00 to 11:20

Alberto Soria Flores (Department of Materiales, Universidad Juárez del Estado de Durango, Durango, Mexico), Ma. Azucena González, J. Viridiana García-Meza, Ángel G. Vázquez Rodríguez, Ignacio González, René H. Lara Castro

Preliminary analysis of the pyrite (FeS_2) oxidation process under bioleaching conditions by electrochemical impedance spectroscopy

11:20 to 11:40

René Homero Lara Castro (Department of Materials, Universidad Juárez del Estado de Durango, Durango, Mexico), Ma. Azucena González, Roel Cruz, J. Viridiana Garcia-Meza, Ángel G. Vázquez Rodríguez, Ignacio González

Surface insights during oxidation of pyrite and chalcopyrite under bioleaching medium conditions

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

Tomás Vargas (Ingeniería Química y Biotecnología, Universidad de Chile, Santiago, Chile)

Electrochemical Aspects of the Bioleaching of Mineral Sulfides

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface

Room : Salon 308

Chaired by: Nuria Garcia-Araez and Anthony Kucernak

09:40 to 10:00

Giovanni Valenti (Department of Chemistry G. Ciamician, University of Bologna, Bologna, Italy), Matteo Cargnello, Alessandro Boni, Massimo Marcaccio, Paolo Fornasiero, Maurizio Prato, Francesco Paolucci

Hydrogen Production: Driving the Electrocatalytic Properties Through Carbon-based Nanocomposite

10:00 to 10:20 **Invited**

Sanjeev Mukerjee (Department of Chemistry and Chemical Biology, Northeastern University, Boston, USA), Urszula Tylus, Kara Strickland, Qingying Jia

Electrocatalytic Pathways in Aqueous and Non Aqueous Environments

10:20 to 10:40

Coffee Break

10:40 to 11:00

Jacek Lipkowski (Department of Chemistry, University of Guelph, Guelph, Canada), Piotr Pieta, Jeff Mirza

Direct visualization of the Alamethicin pore formed in a planar phospholipid matrix

11:00 to 11:20

Kohei Uosaki (International Center for Nanoarchitechtonics (WPI-MANA), National Institute for Materials Science (NIMS), Tsukuba, Japan), Ichizo Yagi, Kazuya Hanaoka, Takayoshi Sumi

Effect of the Crystallographic Orientation and Surface Defects on Reductive Desorption and Readsorption of Self-assembled Monolayer of 6-Hexanethiol at Au(hkl) Single Crystalline Electrodes

11:20 to 11:40

Robert Hillman (Department of Chemistry, University of Leicester, Leicester, United Kingdom), Rachel Brown, Claire Fullarton, Karl Ryder, Virginia Ferreira, Emma Smith, Charlotte Beebee

Constrasting Behaviours of Molecular and Fully Ionic Solvent Permeation of Conducting Polymer Films Under Static and Dynamic Conditions

11:40 to 12:00

Ken-ichi Fukui (Materials Engineering Science, Osaka University, Toyonaka, Japan), Hisaya Hara, Yasuyuki Yokota, Akihito Imanishi, Takafumi Uemura, Junichi Takeya

High Spatial Resolution Interface Analyses of Electrochemical Organic FET with Ionic Liquid

Symposium 13: Education in Electrochemistry

Room : Salon 302

Chaired by: Alanah Fitch

09:40 to 10:00

Gerardine Botte (Center for Electrochemical Engineering Research, Ohio University, Athens, USA)

Strategies in Teaching Electrochemistry for Energy Storage

10:00 to 10:20

Christopher Bell (Mathematical Institute, University of Oxford, Oxford, United Kingdom), Shu Rui Ng, Danny O'Hare

Butler-Volmer Parameter Estimation using Chronoamperometry at an Ultra-Microdisk Electrode

10:20 to 10:40

Coffee Break

10:40 to 11:20

Jorge Ibanez (Chemical Engineering, Universidad Iberoamericana, Mexico, Mexico)

Low Cost Small Scale Electrochemistry Labs

Poster presentation program

Poster Session 1

Symposium 2: Sensing in Living Systems

Fundamentals of bioelectrochemical systems

s02-001

Mónica Bravo-Anaya (Ingeniería Química, Universidad de Guadalajara, Guadalajara, Mexico), J.F.A. Soltero, N. Casillas, Maria Alejandra Carreon Alvarez, E.R. Larios-Duran

Polarization Potential Effect on DNA Molecules Adsorption onto Platinum Electrodes

s02-002

Marcin Dabrowski (Department of Physical Chemistry of Supramolecular Complexes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Zbigniew Wróbel, Wlodzimierz Kutner

Electrochemically-induced mesoporous molecularly imprinted organosilica films, deposited as recognition units of piezomicrogravimetric chiral chemosensors, for selective detection and determination of D-arabitol and L-arabitol

In-vivo biosensing

s02-003

Eurydice Arroyo (PCeIM, CNyN-UNAM, Ensenada, Mexico), Marcela Ovalle, Miguel Armenta, Luis Enriquez, Amelia Olivas

W nanoparticles study on the construction of a prototype of a nano (bio) sensor

Living systems

s02-004

Fethi Bedioui (UPCGI, CNRS 8151 INSERM 1022, Paris, France)

Array of Ultramicroelectrodes for the Simultaneous Detection of Nitric Oxide and Peroxynitrite

s02-005

Shofu Matsuda (Department of Nanoscience and Nanoengineering, Waseda University, Tokyo, Japan), Takuya Nakanishi, Hong Zhang, Akane Tanaka, Hiroshi Matsuda, Tetsuya Osaka

Cellular Uptake of Magnetite Nanoparticles and Induction of Cell Death in Mesothelioma Cells

s02-006

Ren Hu (Department of Chemistry, Xiamen University, Xiamen, China) Chunhui Piao, Changjian Lin, Bin Ren, Christian Amatore, Zhongqun Tian

Amperometry in Combination with Small Interfering RNA to Reveal Protein Function in Exocytotic Release of Catecholamine

Symposium 3: New Concepts for Designing Bioelectrochemical Interfaces

POSTERS

Bioenergy conversion

s03-001

Roberto Ortiz (Biochemistry and Structural Biology / Analytical Chemistry, Lund University, Lund, Sweden), Christopher Sigmund, Roland Ludwig, Lo Gorton

Glucose Biofuel Cell Anode Based on *Corynascus thermophilus Cellobiose* Dehydrogenase and Glucose Enhanced Mutants on Aryl Diazonium Salts Activated Single-Walled Carbon Nanotubes

s03-002

Rigoberto Santoyo-Cisneros (Department of Enviromental Science, Instituto Potosino de Investigación Científica y Tecnologica, San Luis Potosí, Mexico), Bibiana Cercado, Elías Razo-Flores

Effect of anodic poised potential on the removal of naproxen sodium using bioelectrochemical systems (BESs)

Biosensors

s03-003

Francisco Armijo (Departamento Inorgánica, Pontificia Universidad Católica de Chile, Santiago, Chile), Leonard Molero, Mario Faundez, Rodrigo Del Rio, Maria Angelica del Valle

Electrochemistry Behavior of Tryptophan on Fluorine Doped Tin Oxide Electrodes

s03-004

Francisco Armijo (Departamento Inorgánica, Pontificia Universidad Católica de Chile, Santiago, Chile), Rodrigo Salgado, Maria Angelica del Valle

Dopamine sensor based on nanowires PEDOT /polydopamine modified electrode

s03-005

Omotayo Arotiba (Department of Applied Chemistry, University of Johannesburg, Johannesburg, South Africa), Suru John, Lia Rotherham, Makobetsa Khati, Bhekie Mamba

Towards HIV Sensing: Electrochemical DNA and gp120 Aptamer Biosensors on Dendrimer-Streptavidin Platform

s03-006

Michelle Arredondo (Department of Electrochemistry Laboratory, Instituto Ingeniería UABC, Mexicali, Mexico)

Electrochemical Assay for Trypsin Activity Quantification

s03-007

Boris Duran (Department of Pharmacy, Pontificia Universidad Católica de Chile, Santiago, Chile)

Electrochemical immunosensor based on gold nanoparticles for detecting corticotropin realising factor

s03-008

Camilo García (Department of Materials Chemistry, University of Santiago of Chile, Santiago, Chile), Maria Aguirre

Hybrids cationic 5,10,15,20-tetrakis(α-tri-phenylphosphonio-p-tolyl porphyrins/Quantum dots and its interaction with DNA calf thymus

s03-009

Natalia Gasilova (LEPA, ISIC, SB, Ecole polytechnique Fédérale de Lausanne, Lausanne, Switzerland), Qiuliyang Yu, Liang Qiao, Hubert Girault

Coupling of Droplet Microfluidic Platform with Electrostatic-Spray Ionization Mass Spectrometry

s03-010

Maria Gómez-Mingot (Dpt. Physical Chemistry and Institute of Electrochemistry, Universidad de Alicante, Alicante, Spain), Elena González, Conchi Ania, Vicente Montiel, Jesús Iniesta

Acetylcholinesterase Biosensors Based on Immobilization on Mesoporous Carbon Supports for the Detection of Pesticides

s03-012

Vladimir Halouzka (Department of Chemistry, Masaryk University, Faculty of Science, Brno, Czech Republic), Rudolf Navratil, Iveta Pilarova, Frantisek Jelen, Libuse Trnkova

A Novel Electrochemical Sensor for the Detection of Purine Derivatives

s03-013

Scott Harroun (Department of Chemistry, Saint Mary's University, Halifax, Canada), Reem Karaballi, Christa Brosseau

Development of a DNA-based Biosensor for Rapid Detection of Tuberculosis at the Point-of-Care

s03-014

Sho Hideshima (Faculty of Science and Engineering, Waseda University, Tokyo, Japan), Masumi Kobayashi, Shigeki Kuroiwa, Takuya Nakanishi, Naoya Sawamura, Toru Asahi, Tetsuya Osaka

Response of Field Effect Transistor Biosensor to Amyloid Beta (1-42) Depending on Its Growth

s03-015

Izabela Kaminska (Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Sylwester Gawinkowski, Martin Jonsson-Niedziolka, Joanna Niedziolka-Jonsson, Marcin Opallo

Gold nanoparticles electrogenerated at a three-phase junction and their application in surface-enhanced Raman spectroscopy

s03-016

Elena Karyakina (Department of Chemistry, M.V. Lomonosov Moscow State University, Moscow, Russia), Eugene Yashina, Medeya Mchedlishvili, Aleksander Luchnovich, Eldar Anayev, Arkady Karyakin

Prussian Blue Based Lactate Biosensor for Non-invasive Diagnostics

s03-017

Fred Lisdat (Biosystems Technology, Technical University of Applied Sciences Wildau, Wildau, Germany), Marc Riedel, Gero Göbel

Coupling of enzyme reactions with QD electrodes - a photobioelectrochemical sensors for sarcosine

s03-018

Jessica Márquez León (Department of Chemical Sciences, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico), Luis Felipe Cházaro Ruiz, Laszlo Zimányi

Electrochemical Study of Cytochrome C Immobilized on Porous Silicon Devices

s03-019

Judith Rishpon (Department of molecular microbiolgy and biotechnology, Tel-Aviv University, Tel-Aviv, Israel), Olga Dorman, Michal Mossberg, Ehud Gazit

Peptide-Nanostructure combined with carbon-nanotubes for Ultrasensitive Bio-Electrochemical Sensors

s03-020

Gulnara Safina (Department of Chemistry and Molecular Biology, University of Gothenburg, Gothenburg, Sweden), Jenny Bergman, Jun Wang, Johan Dunevall, Wolfgang Harreither, Lo Gorton, Andrew Ewing

Novel Electrochemical Biosensing Platform Based on Vertically Aligned Nanostructured Material

s03-021

Libuse Trnkova (Department of Chemistry, Masaryk University, Faculty of Science, Brno, Czech Republic), Iveta Pilarova, Frantisek Jelen, Vojtech Adam, Rene Kizek

Elimination Voltammetry as an Effective and Sensitive Electroanalytical Tool

s03-022

Qin Zhang (College of Bioengineering, Jimei University, Xiamen, China), Jie Xu, Xiaohui Pan, Wei Guo, Qintao Li

Large-area Mono-layer Graphene Supported by Substrate for Glucose Electrochemical Biosensing Application

Enzymatic catalysis

s03-023

Stéphane Arbault (Institute of Molecular Sciences, CNRS UMR 5255, University of Bordeaux, Pessac, France), Bertrand Goudeau, Oksana Travkova, Emmanuel Suraniti, Rumiana Dimova

Coupled Fluorescence-Electrochemical Study of Enzymatic Reactions in Biomimetic Micrometric Vesicles

s03-024

Martin Jonsson-Niedziolka (Department of Electrode Processes, Institute of Physical Chemistry, PAS, Warsaw, Poland), Magdalena Kundys, Dawid Kaluza, Adrianna Zloczewska, Marcin Opallo

Investigation of the Kinetics of Enzymatic Reactions in Solution Using RDE and Microfluidics

s03-025

Marccus Victor Almeida Martins (Department of Nanoscience and Nanotecnology, Federal University of ABC, Santo André, Brazil), Frank Nelson Crespilho

Enzyme Immobilization and Direct Electrochemistry Based on a New Flexible Carbon Fiber-Graphene Electrode

s03-026

Woonsup Shin (Department of Chemistry and Interdisciplinary Program, Sogang University, Seoul, Korea), Jieun Song, Duraisamy Saravanakumar

Microbial Activation of Carbon Dioxide and Functional Mimicking

s03-027

Elena Suprun (Department of Personalized Medicine, Institute of Biomedical Chemistry, RAMS, Moscow, Russia), Tatiana Bulko, Victoria Shumyantseva, Alexander Archakov, Anna Makhova, Evgeniya Shich, Vladimir Kukes

The Electrocatalytic Cycle of Cytochrome P450 2C9: Influence of Antioxidants and Vitamins A, C, E

Modified electrodes

s03-028

Soledad Bollo (Pharmacology and Toxicology, University of Chile, Santiago, Chile), Maria Victoria Bracamonte, Gustavo Adolfo Rivas, Nancy Fabiana Ferreyra

Biorecognition platform based on electrodes modified with diazonium salts. Application to Concanavalin A immobilization

s03-029

Yazmin Gil-Orozco (Department of Materials, Universidad Autónoma Metropolitana Azcapotzalco, D.F., Mexico), Silvia Corona-Avendaño, Mario Romero Romo, Manuel Palomar-Pardavé, María-Teresa Ramírez-Silva

Electrochemical and spectrophotometric assessment of the serotonin's complexation constants with b-cyclodextrin

s03-030

Yazmin Gil-Orozco (Materiales, Universida Autónoma Metropolitana Azcapotzalco, D.F., Mexico), Silvia Corona-Avendaño, Mario Romero Romo, M.G. Montes de Oca-Yemha, María-Teresa Ramírez-Silva, Manuel Palomar-Pardavé

Serotonin determination by means of a carbon paste electrode modified with a beta-cyclodextrin polymer and with Au nanoparticles

s03-031

Takuro Murata (Department of Material Chemistry, Grad School of Engineering, Kyoto University, Kyoto, Japan)

Bioelectrochemical Applications of Metal Nanoparticle-Modified Electrodes Prepared with Non-Conducting Supports

s03-032

Juan Squella (Department of Organic and Physical Chemistry, University of Chile, Santiago, Chile)

Encapsulated nitrofluorene derivatives on multiwalled carbon nanotubes modified electrodes

s03-033

Marcos F. S. Teixeira (Faculty of Science and Technology, São Paulo State University (UNESP), Presidente Prudente, Brazil), Ana C. V. Mascarenhas, Paulo A. Raymundo-Pereira, Patrícia M. Seraphim

Novel Electrochemical Biosensor Based On Mediator Ruthenium Oxo-Complex

Symposium 4a: Novel Materials and Devices for Energy Storage and Conversion: Electrochemical Capacitors

Asymmetric and hybrid systems

s04a-001

Fernando Godínez (Department of Chemistry, CINVESTAV, México, Mexico), Omar Solorza, Luis Lanturdo, Hector Calderon, Jorge Vargas

Study of the Effect of Pt Shell Coverage on Ni Core for the Oxygen Reduction Reaction

Pseudocapacitance

s04a-002

Daniel Bélanger (Chimie, Université du Québec à Montréal, Montréal, Canada), Annaïg Le Comte, Thierry Brousse

Modification of carbon with quinones

Supercapacitor

s04a-003

Paol Navid García Hernández (Renewable Energy Unit, CICY, Mérida, Mexico), Enrique Morales

Performance of supercapacitors based on poly(pyrrole)/graphene and PEDOT/graphene

s04a-004

Alain Pailleret (LISE (UPR 15 of CNRS), University Pierre and Marie Curie (Paris VI), Paris, France), Lynda Benhaddad, Claude Deslouis, Laïd Makhloufi, Bouzid Messaoudi, Hisasi Takenouti

Nanostructured polypyrrole powders : From synthesis using MnO_2 as sacrificial oxidizing template to applications in composite electrode materials for supercapacitors

Later registration

s04a-004

José Martin Baas López (Renewable Energy Unit, CICY, Merida, Mexico) Maribel Solís de la Cruz

Hybrid materials based on graphene/conducting polymer/POM as electrode for supercapacitors

Symposium 4b: Novel Materials and Devices for Energy Storage and Conversion: Batteries

Lithium ion batteries

s04b-001

Ling Huang (Department of Chemistry, Xiamen University, Xiamen, China)

Room-temperature synthesis of $Co(OH)_2$ hexagonal sheets and their topotactic transformation into Co_3O_4 (111) porous structure with enhanced lithium-storage properties

s04b-002

Richard Kloepsch (Institute of Physical Chemistry / MEET Battery Research Center, University of Muenster, Muenster, Germany), Steffen Krueger, Martin Winter, Jie Li

Effect of surface-fluorination on the electrochemical performance of Li-rich layered oxide cathode material $Li_{1.2}Mn_{0.56}Ni_{0.16}Co_{0.08}O_2$

s04b-003

Genki Kobayashi (Department of Material and Life Chemisty, Kanagawa University, 3-27-1, Rokkakubashi, Kanagawa-ku, Yokohama, Japan), Yuta Irii, Futoshi Matsumoto, Atsushi Ito, Shinji Yamamoto, Masaharu Hatano, Yuichi Sato

Surface and Bulk Structures of Li-Rich Layered Oxides, $x LiMO_2 – (1-x)Li_2MnO_3$, Coated with Al_2O_3

s04b-004

Tatiana Kulova (Laboratory of Power Sources, Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow, Russia), Alexander Skundin, Alexander Mironenko, Alexander Rudyi

Si/SiO_2 Nanostructured Composite as Anode for Lithium-Ion Batteries

s04b-005

Jie Liu (Department of Chemistry, Xiamen University, Xiamen, China), Qian Zhang, Jie Liu, Jun-Tao Li, Ling Huang, Shi-Gang Sun

Three-dimensional structured silicon film anode material of lithium-ion battery with high performances

s04b-006

Sun-il Mho (Dept. of Chemistry, Energy Systems Research, Ajou University, Suwon, Korea), Jeong-Jin Lee, Hung-Cuong Dinh, Yongku Kang

Electrochemical Properties of C-coated Li_2MSiO_4(M=Fe,Mn) Nanocrystalline Cathodes

s04b-007

Ha-Kyung Roh (Department of Material Science & Engineering, Yonsei University, Seoul, Korea), Hyunkyung Kim

Solvothermal synthesis of $LiTi_2(PO_4)_3$/Reduced graphene oxide nanocomposite for high-rate lithium ion batteries

s04b-008

Yuichi Sato (Research Institute for Engineering, Kanagawa University, Yokohama, Japan), Genki Kobayashi, Yuta Irii, Nobuya Kitada, Futoshi Matsumoto, Ryo Ohtsu, Kohei Shibukawa, Atsushi Ito, Shinji Yamamoto, Yasuhiko Ohsawa

Surface Modification Effect on Electrochemical Performance of Li-rich Layered xLi_2MnO_3-(1-x)$LiMO_2$

s04b-009

Shi-Gang Sun (Department of Chemistry, Xiamen University, Xiamen, China), Fang Fu, Ya-Ping Deng, Qi Wang, Gui-Liang Xu, Ling Huang

Enhancing the Rate Performance of Li-rich Layered Materials of $Li_{1.2}Mn_{0.56}Ni_{0.12}Co_{0.12}O_2$ as Cathode of Lithium-ion Battery by Composite Modification

s04b-010

Radovan Vukicevic (Department of Physical Chemistry-MEET, University of Muenster, Muenster, Germany), Alexandra Lex-Balducci, Martin Winter, Shahmahmood Obeidi

Poly(acrylonitrile-co-oligo(ethylene glycol) phenyl ether acrylate) for application in lithium-ion batteries

s04b-011

Lianbang Wang (College of Chemical Engineering and Material Science, Zhejiang University of Technology, Hangzhou, China), Pinjie Zhang, Jian Xie, Chun an Ma, Jingkang Jiang

SiOx -PANI-Ag composite as anode material for lithium-ion batteries: With controlled Si oxidation state through a magnesiothermic reduction strategy

s04b-012

Jian Xie (College of Chemical Engineering and Material Science, Zhejiang University of Technology, Hangzhou, China), Lianbang Wang, Yali Sha, Chun an Ma

Improved electrochemical properties of LiV_3O_8 by chlorine doping

s04b-013

In-Hyeong Yeo (Department of Chemistry, Dongguk University, Seoul, Korea), Dah-Yeon Yoo, Sun-il Mho, Won Il Cho

Layer-Structured $LiMnO_2$ and Li_2MnO_3 Nanoparticle and Polypyrrole Composite Film Cathodes

s04b-014

In-Hyeong Yeo (Department of Chemistry, Dongguk University, Seoul, Korea), Hung-Cuong Dinh, Sun-il Mho, Yongku Kang

Nanocrystalline $LiMPO_4$ (M= Fe, Mn, Co) Cathodes Synthesized by Hydrothermal Processes with Various Surfactants

s04b-015

Pinjie Zhang (College of Chemical Engineering and Material Science, Zhejiang University of Technology, Hangzhou, China), Lianbang Wang, Jian Xie, Xiaohui Wang, Chun an Ma

One pot synthesis of controllable PANI@Sn@Cu core-shell nanomaterials as precursors to high performance C@Cu-Sn anodes for Li-ion batteries

Novel battery materials

s04b-016

Won Il Cho (Center for Energy Convergence Research, KIST(Korea Institute of Science and Technology), Seoul, Korea), Eon Sung Shin, Si Hyoung Oh, Jang Myun Ko

Hollow Carbon/Sulfur Nano-composite Cathode for Lithium-Sulfur Batteries

s04b-017

Won Il Cho (Center for Energy Convergence Research, KIST(Korea Institute of Science and Technology), Seoul, Korea), Ki Yoon Bae, Min Seob Song, Si Hyoung Oh

Effects of Heat Treatment Temperature on the Electrochemical Properties of $ZnMn_2O_4$

s04b-018

Daniel Cintora Juarez (Department of Inorganic Chemistry and Chemical Engineering, Universidad de Córdoba, Córdoba, Spain), Carlos Pérez-Vicente, Shahzada Ahmad, José Luis Tirado

Improved cycling performance of $LiFePO_4$ cathode material by coating with PEDOT conducting polymer

s04b-019

Hiroki Nara (Faculty of Science and Engineering, Waseda University, Tokyo, Japan), Toshiyuki Momma

Modification of Sulfur Cathode by Block Copolymer Gel Composed of Polyethylene Oxide-Polystyrene and LiFSA/BMPFSA for Lithium Secondary Battery

s04b-020

Hiroaki Okamoto (Department of Applied Chemistry, Yamaguchi University, Ube, Japan), Tomohiro Yoshida, Masahiro Miura, Hiroko Tatsuno, Ayuko Iuchi, Yuki Morita

Preparation and electrochemical of organogel electrolyte based on aprotic low molecular weight organic gelators

s04b-021

Alberto Rosas-Aburto (Facultad de Química, Universidad Nacional Autónoma de México, México, Mexico), Pedro Roquero-Tejeda, Martín Hernández-Luna, Javier Revilla-Vázquez

Physicochemical Characterization of PEDOT: Halloysite Nano-tubes as Conductive Fillers in Polymers

s04b-022

Alessandro Stassi (Istituto di Tecnologie Avanzate per l'Energia, CNR-ITAE, Messina, Italy), Massimiliano Lo Faro, Sabrina Zignani, Mariarita Girolamo, Antonino S. Aricò, Vincenzo Baglio

Synthesis and Characterization of Nanocatalysts for Air Electrodes in Fe-Air Batteries

s04b-023

Misa Ueno (Department of Applied Material and Life Science, Faculty of, Kanto Gakuin University, Yokohama, Japan), Miku Gotou, Nobuaki Watanabe, Yasushi Sasaki, Tsugito Yamashita, Ichiro Koiwa, Kazuhiro Yabe, Takaharu Nakamura

Influence of the Memory Effect on Electron Probe Micro Analyzer Mapping and Transmission Electron Microscopy in Positive Electrode of Ni-MH Batteries

s04b-024

Lifen Xiao (College of Chemistry, Central China Normal University, Wuhan, China), Jia Nie, Xinping Ai, Yuliang Cao, Hanxi Yang

Polyaniline/graphene composite for the construction of sulfur electrode with high capacity utilization and long cycle life

s04b-025

Nobuko Yoshimoto (Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Kazuhiro Yamabuki, Jun-ya Hishii, Minato Egashira, Masayuki Morita

Ionic Conductance Behavior of Polymeric Gel Electrolyte Consisting of Network Polymer Using Rotaxane Structure for Mg Batteries

Novel rechargeable batteries

s04b-026

Abd-El-Aziz Abd-El-Salehin (Inst. of Physical Chemistry, University of Bonn, Bonn, Germany), Christoph Bondue, Helmut Baltruschat

Oxygen Reduction and Oxygen Evolution Reactions in Non-Aqueous Electrolyte as studies by DEMS

s04b-027

Silvia Bodoardo (Department of Applied Science and Technology - DISAT, Politecnico di Torino, Torino, Italy), Juqin Zeng, Jijeesh Ravi Nair, Carlotta Francia, Claudio Gerbaldi, Nerino Penazzi

A mesoporous carbon based cathode for high performance Li-O_2 cells

s04b-028

K. Andreas Friedrich (Institute of Technical Thermodynamics, German Aerospace Center, Stuttgart, Germany)

Investigation of rechargeable lithium-sulfur batteries by *in-situ* techniques: Insight into interfacial processes

s04b-029

Ayuko Kitajou (Elements Strategy Initiative for Catalysts and Batteries, Kyoto University, Kasuga, Japan), Hironobu Hori, Eiji Kobayashi, Shigeto Okada

Cathode Properties of Iron Oxide-AF (A=Li and Na) Composite Cathode for Lithium and Sodium-Ion Batteries

s04b-030

Francesca Soavi (Dipartimento di Chimica Giacomo Ciamician, University of Bologna, Bologna, Italy), Simone Monaco, Marina Mastragostino

Rechargeable Li/O_2 Battery with Pyrrolidinium-Based Electrolyte

Redox flow batteries

s04b-031

Jaromir Pocedic (New Technologies - Research Centre (NTC), University of West Bohemia, Pilsen, Czech Republic), Petr Mazur, Jiri Vrana, Marek Bobak, Juraj Kosek

Intensification of the all-vanadium redox flow battery

Symposium 4c: Novel Materials and Devices for Energy Storage and Conversion: Fuel and Biofuel Cells

Degradation and mitigation strategies

s04c-001

Luis Castanheira (LEPMI - ESME, Grenoble INP, Grenoble, France), Laetitia Dubau, Frederic Maillard

Carbon corrosion in Pt/C catalysts: Further insights by combined Raman, XPS and IL-TEM experiments

s04c-002

Alix Melchy (Department of Chemistry, Simon Fraser University, Burnaby, Canada)

Kinetic model of chemical degradation in perfluorinated sulfonic acid ionomer membranes

Electrocatalysis

s04c-003

Thiago Almeida (Department of Chemistry, University of São Paulo, Ribeirão Preto, Brazil), Adalgisa De Andrade, Hector Abruna

Effect of Fe and Ni on Pt-based catalysts towards Ethanol Electro-oxidation in Alkaline Media

s04c-004

Pere L. Cabot (Department of Physical Chemistry (Faculty of Chemistry), University of Barcelona, Barcelona, Spain), Griselda Caballero-de-Sánchez, Amado Velázquez-Palenzuela, Enric Brillas, Francesc Centellas, José A. Garrido, Rosa M. Rodríguez

Synthesis and Characterization of Pt-Ru(Cu)/C Electrocatalysts for CO Oxidation

s04c-005

Luis Alberto Estudillo Wong (Department of Process Engineering, ESIQIE-IPN, Mexico, Mexico)

TiO_2-C composite as a support for Pd-nanoparticles toward the electrocatalytic oxidation of methanol in alkaline media

s04c-006

Tsutomu Ioroi (Research Institute of Ubiquitous Energy Devices, AIST, Ikeda, Japan), Masafumi Asahi, Tsukasa Nagai, Shin-ichi Yamazaki, Zyun Siroma, Naoko Fujiwara, Kazuaki Yasuda

Corrosion-Resistant Sub-Stoichiometric Titanium Oxide Catalyst Support for Unitized Regenerative Fuel Cells

s04c-007

Maria Luisa Lozano Camargo (Department of the Environmental Engineering, Tecnológico de Estudios Superiores del Oriente del Estado de México, Mexico), Laura Galicia, Enrique Barrera

Electrochemical Formation and optical characterization of Fe(III)-5-Aphen polymer on ITO

s04c-008

Natalia Mayorova (Department of Processes in Batteries, Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow, Russia), Olga Zhigalina, Victoria Zhigalina, Olga Khazova

Pt/Pd/C Quasi Core-Shell Structures with Submonolayer Platinum Amounts

s04c-009

Maria de los Angeles Montero (PRELINE - Facultad de Ingenieria Quimica, Universidad Nacional del Litoral, Santa Fe, Argentina), Jose Luis Fernandez, Maria Rosa Gennero de Chialvo, Abel Chialvo

Kinetic Study of Nanostructured Rhodium Electrodes Towards Hydrogen Oxidation Reaction

s04c-010

M.G. Montes de Oca-Yemha (Department of Materials, UAM-A, Mexico City, Mexico), Araceli Ezeta, Elsa Arce, Mario Romero Romo, Silvia Corona-Avendaño, Manuel Palomar-Pardavé

Synthesis of nanostructured catalysts type RuX (X=Se, Mo, W, Sn) AND RuYMo (Y=Se, Sn) by mechanical alloying for proton reduction

s04c-011

Edson A. Ticianelli (Departamento de Fisico Quimica, Instituto de Quimica de Sao Carlos, Sao Carlos, Brazil), Orlando L. S. Ferreira

Investigations of the Activity and Stability of Pt-based/WC-C Catalysts for the Oxygen Reduction Reaction in Acid Medium

s04c-012

Miguel Torres (Department of Basic Sciences, UAM-Azcapotzalco, Mexico, Mexico), Guadalupe Montes de Oca, Teresa Licona, Mario Romero-Romo, Manuel Palomar-Pardavé

Copper–palladium bimetalic nanopaticles for proton reduction and hydrogen oxidation

s04c-013

Yoshiharu Uchimoto (Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan)

Relationship between local structure and catalytic activity of monolayer Pt catalysts for oxygen reduction

s04c-014

Jorge Uribe-Godínez (Química Inorgánica, Instituto de Química de la UNAM, México, Distrito Federal, Mexico), Verónica García-Montalvo, Omar Jiménez-Sandoval

A Bimetallic Electrocatalyst Capable to Perform the ORR and HOR in the Presence of Fuel Cell Contaminants

s04c-015

Jorge Uribe-Godínez (Química Inorgánica, Instituto de Química de la UNAM, México, Distrito Federal, Mexico), Verónica García-Montalvo, Omar Jiménez-Sandoval

A New Rh/Ru-based Material and its Use as Electrocatalyst for the Oxygen Reduction and Hydrogen Oxidation Reactions

s04c-016

Hebe de las Mercedes Villullas (Instituto de Química, UNESP, Araraquara, Brazil)

Ethanol Oxidation on Binary and Ternary Pt-Based Nanocatalysts containing Sn and Rh

s04c-017

Wei-Hua Yang (College of Materials Science and Engineering, Huaqiao University, Xiamen, China), Hong-Hui Wang, Shi-Gang Sun

The Promoting Effect of nm-PbO_2 on Pt Black for Ethanol Electrooxidation

s04c-018

Min Yin (Changchun Institute of Applied Chemistry, University of Chinese Academy of Sciences, Changhcun, China)

Nitrogen-containing Carbon Coated CNTs as Supports of Pd-based Catalysts for Methanol Oxidation in Alkaline Media

Microfuel cells

s04c-019

Noé Arjona (Investigación y Posgrado, CIDETEQ S.C., Querétaro, Mexico), Mercedes Teresita Oropeza Guzmán, Gabriel Trejo Córdoba, Minerva Guerra Balcázar, Janet Ledesma-García, Luis Gerardo Arriaga

Modification of Au Structures With Different Energy Surfaces: an Electrokinetic Analysis

s04c-020

Hugo Avila-Paredes (Depto. de Ingeniería de Procesos e Hidráulica, Universidad Autónoma Metropolitana Unidad Iztapalapa, Mexico City, Mexico), Ricardo De la Torre García

Fabrication of Micro-Tubular Solid Oxide Fuel Cells by Dip Coating

s04c-021

Andres Dector (Department of Energia Renovable, Centro de Investigacion y Desarrollo en Electroquimica, Queretaro, Mexico)

Evaluation of glucose microfluidic fuel cell based in electrodeposition electrodes on Pyrolized photoresist films

s04c-022

A. Moreno-Zuria (Alternative Energies, CIDETEQ, Querétaro, Mexico), Andres Dector, Luis Gerardo Arriaga, Janet Ledesma-García, J.P. Esquivel, Abraham Ulises Chávez-Ramírez

Micro-fabrication and electrochemical evaluation of a compact SU-8 micro-fuel cell

New materials for fuel cells and biofuel cells

s04c-023

Gerardo Isaac Alba (Department of Electrochemistry, Centro de Investigación y Desarrollo en Electroquímica S.C., Sanfandila, Pedro Escobedo, Mexico), Abraham Chávez, Julio Cruz, Luis Gerardo Arriaga

Study of water saturation in the gas diffusion layer in a PEM Fuel Cell

s04c-024

Lorena Alvarez Contreras (Department of Nanostructured Materials, Centro de Investigación en Materiales Avanzados S.C., Chihuahua, Mexico), Ana Maria Valenzuela-Muñiz

Study of the effect of additive content on Pt/SBA-15 electrocatalyst performance

s04c-025

Mara Beltrán Gastélum (Centro de Graduados e Investigación en Química, Instituto Tecnológico de Tijuana, Tijuana, Mexico), Edgar Alonso Reynoso Soto, Francisco Paraguay Delgado, Gabriel Alonso-Núñez

Synthesis and Evaluation of Nanostructures Electrocatalyst for Fuel Cells

s04c-026

Raúl Carrera-Cerritos (Department of Chemical Enginnering, University of Guanajuato, Guanajuato, Mexico), Rosalba Fuentes-Ramírez, Janet Ledesma-García, Luis Gerardo Arriaga

Electro-oxidation of Ethanol on PdAg/C catalyst synthesized by polyol process

s04c-027

Beatriz Escobar Morales (Department of Research and Graduate, Instituto Tecnológico de Cancún, Cancún, Mexico), Romeli Barbosa, Ana Maria Valenzuela-Muñiz, Ysmael Verde-Gomez

Electrochemical Properties of PtRu Nanoparticles Obtained by Colloidal Dispersion and Supported on MWCNT

s04c-028

Jose Luis Fernandez (PRELINE - Facultad de Ingenieria Quimica, Universidad Nacional del Litoral, Santa Fe, Argentina), Mariela Brites Helu, Maria Rosa Gennero de Chialvo, Abel Chialvo

Hydrogen Oxidation on ensembles of Pt nanostructures supported on microelectrodes

s04c-029

Mayra Polett Gurrola (Investigación y Posgrado, CIDETEQ S.C., Pedro Escobedo, Mexico), Minerva Guerra Balcázar, Rufino Nava, Janet Ledesma-García, Luis Gerardo Arriaga

Synthesis and Characterization of High Surface Support Based on Sb - Doped SnO_2

s04c-030

Jungwon Jeong (Department of Material Science and Engineering, Incheon National University, Incheon, Korea), Insoo Choi, Hyunjoon Lee, Yong-Hun Cho, Jae Jeong Kim

The effect of Pt-based hollow catalyst on the performance of DMFC

s04c-031

Deborah Jones (ICGM - Aggregates, Interfaces and Materials for Energy, University Montpellier 2 and CNRS, Montpellier, France), Surya Subianto, Jacques Roziere, Sara Cavaliere, Yannig Nedellec, Paula Cojocaru, Luca Merlo, Graham Hards, Sarah Burton, Mario Casciola, Monica Pica, Anna Donnadio

Low Equivalent Weight Short Side Chain PFSA with Improved Mechanical Properties

s04c-032

Padmasree Karinjilottu Padmadas (Sustentabilidad de los Recursos Naturales y Energía, CINVESTAV Unidad Saltillo, Ramos Arizpe, Mexico), Ericka Arely Gonzaga-Méndez, Diana Morales-Acosta, Francisco Javier Rodríguez Varela

Evaluation of Pt Supported on Metal Oxides as Electrocatalysts for the Ethanol Oxidation Reaction

s04c-033

Hyunjoon Lee (Department of Energy and Chemical Engineering, Incheon National University, Incheon, Korea), Insoo Choi, Jae Jeong Kim, Oh Joong Kwon

Relation between The PEMFC Peformance and The Thickness of Pt-SiO_2 Catalyst Layer

s04c-034

Chun an Ma (College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou, China), Ling Zhi Kang, Wei ming Liu, Di Zhao, Xiao Ling Lang, Mei Qin Shi

Direct synthesis of tungsten carbide supported on the ordered mesoporous carbon

s04c-035

Diana Morales (Programa de Nanociencias y Nanotecnología, Cinvestav Unidad Saltillo, Saltillo, Mexico), Javier Rodriguez-Varela

Synthesis and performance of Pt supported on ordered mesoporous carbon as catalysts in DAFC: Effect of the support

s04c-036

Noelia Ruiz (Department of Chemical Engineering and Environment, University of The Basque Country (UPV-EHU), San Sebastian, Spain), Angel R. Pierna, Agustin Lorenzo, Tamara C. Blanco, Maialen Sanchez, Eider Artutxa

$Ni_{59}Nb_{40}Pt_{0.6}X_{0.4}$ (X= Pd, Rh, Co, Ru) Amorphous catalysts as cathodes, supported on membranes Nafion XL for PEMFC

s04c-037

Noelia Ruiz (Department of Chemical Engineering and Environment, University of the Basque Country (UPV-EHU), San Sebastian, Spain), Angel R. Pierna, Agustin Lorenzo, Tamara C. Blanco, Eider Artutxa, Maialen Sanchez

Ternary amorphous alloys based on $Ni_{59}Nb_{40}Pt_{0.6}Sn_{0.2}X_{0.2}$ (X= Co, Pd) as electrocatalysts for PEMFCs

s04c-038

Germano Tremiliosi-Filho (Department of Physical Chemistry, Instituto de Quimica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos, Brazil), Luiz Henrique S. Gasparotto, Amanda Cristina Garcia, Janaina Fernandes Gomes

New Route for the Synthesis of Gold Nanoparticles. The Electrocatalytic Performance Towards the Electro-oxidation of Borohydride

s04c-039

Ana Maria Valenzuela Muñiz (Division of Research and Graduate, Instituto Tecnologico de Cancun, Cancun, Mexico), Beatriz Escobar

Electrocatalytic Behavior of Novel PtNi/MWCNT in the Oxygen Reduction Reaction

s04c-040

Gerardo Vázquez-Huerta (Department of Energy, Autonomous Metropolitan University, Mexico DF, Mexico), Salvador Osvaldo Arenas-Briseño, M.G. Montes de Oca-Yemha, José Angel Dávila-Gómez

Au@Pt/C Behavior as Anodic Catalyst in a PEMFC Fed with CO-H_2 in the Anodic Compartment

Novel synthesis routes

s04c-041

Deborah Jones (ICGM - Aggregates, Interfaces and Materials for Energy, University Montpellier 2 and CNRS, Montpellier, France), Sara Cavaliere, Iuliia Savych, Yannick Nabil-Moreau, Surya Subianto, Jacques Roziere

Effect of Non-Carbon Nanostructured Supports on the Stability of Pt Nanoparticles during Voltage Cycling

s04c-042

Yoshihiro Mugikura (Energy Engineering Research Laboratory, Central Research 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

s04c-043

Mariela Ortiz (Department of Electrochemistry, INIFTA, La Plata, Argentina)

Electrochemical Characterization of Nickel Hydroxide Electrodes with MWCNT

s04c-044

Carolina Silva Carrillo (Centro de Graduados e Investigación en Química, Instituto Tecnológico de Tijuana, Tijuana, Mexico), Edgar Alonso Reynoso Soto, Gabriel Alonso-Núñez, Francisco Paraguay Delgado

Synthesis of Pt Np/MWCNT for the Oxygen Reduction Reaction

s04c-045

Ana M Castro Luna (Department of Chemistry, INIFTA UNLP, La Plata, Argentina) Alejandro R. Bonesi, Sergio M. Moreno, Guillermo Zampieri, Silvina Bengio, Walter E. Triaca

Influence of Metallic Oxides on Ethanol Oxidation

Symposium 4d: Novel Materials and Devices for Energy Storage and Conversion: Physical Modeling and Numerical Simulation of Electrochemical Power Generators

Computational electrochemistry

s04d-001

Alejandro A. Franco (Laboratoire de Réactivité et de Chimie des Solides (LRCS), Université de Picardie Jules Verne & CNRS (UMR 7314), Amiens, France)

MS LIBER-T: A new multiscale computational framework for the simulation of electrochemical devices for energy conversion and storage

Energy storage and conversion

s04d-002

Karen Chan (Chemistry, Simon Fraser University, Burnaby, Canada), Michael Eikerling

Water Balance Model for Membrane Electrode Assemblies with Ultrathin Catalyst Layers

s04d-003

Adrian Velazquez (Materiales, Universidad Politecnica del Valle de México, Estado de México, Mexico)

Evaluation of Catalytic Activity of Au-Pd Nanoparticles for Hydrogen Evolution Reaction

Physicochemical modeling

s04d-004

Michael Eikerling (Department of Chemistry, Simon Fraser University, Burnaby, Canada), Motahareh Safiollah, Pierre-Eric Melchy

Modelling of water sorption and swelling in polyelectrolyte membranes under the impact of degradation

Symposium 9: Electrochemistry in the Mining Industry: Fundamentals, Mineral Processing, Metal Recovery and Environmental Issues

Electrochemical mechanisms of leaching systems (or leaching electrochemistry)

s09-001

Denise Bevilaqua (Department of Biochemistry and Chemical Technology, UNESP - Universidade Estadual Paulista, Araraquara, Brazil), Fabiana Delfino, Cecilio Fugivara, Assis Benedetti

Evaluation of the electrochemical behavior of carbon paste electrode (CPE) with chalcopyrite ($CuFeS_2$) in the presence of ferrous ions

Electrometallurgy

s09-002

Mario Grágeda (Department of Chemical Engineering and Mineral Processing, Universidad de Antofagasta, Antofagasta, Chile), Svetlana Ushak, Maria Elisa Taboada, Teofilo Graber, Sussy Ximena Veliz Moraga

Influence of anodic polarization in electrodialysis cell for production of battery grade lithium compounds

Flotation electrochemistry

s09-003

David Moreno-Medrano (Department of Chemical Engineering, Universidad de Guadalajara, Guadalajara, Mexico), N. Casillas, Roxana Larios, Roel Cruz-Gaona, Rene Lara-Castro, Maximiliano Barcena-Soto

EIS Evaluation of Kinetics Parameters for the Anodic Oxidation of Galena in Presence of Xanthate

Mining waste electroremediation

s09-004

Lucía Alvarado (Department of Chemistry, Lakehead University, Thunder Bay, Canada), Israel Rodríguez Torres, Aicheng Chen

Integration of Ion Exchange and Electrodeoinization as a New Approach for the Recovery of Chromium

s09-005

Gilberto Carreño-Aguilera (Department of Geomatics and Hydraulics Engineering, University of Guanajuato, Guanajuato, Mexico)

Removal of Arsenic (v) from an Abandoned Mine Drainage, by an Electro-Coagulation Process

Symposium 10: Molecular and Computational Electrochemistry of Molecules with Biological and Pharmacological Activity

POSTERS

Density functional theory

s10-001

De-Yin Wu (Department of Chemistry, Xiamen University, Xiamen, China)

Photoinduced Surface Catalytic Reactions of Aromatic Aniline Adsorbed on Silver Electrodes

Electrochemistry of biologically active molecules and pharmaceuticals

s10-002

Sebojka Komorsky-Lovriæ (Rudjer Boskovic Institute, Zagreb, Croatia), Ivana Novak

Abrasive stripping voltammetry of myricetin and dihydromyricetin

s10-003

Valberes Nascimento (Departmento de Química, Universidade Federal Rural de Pernambuco, Recife, Brazil), Franklin Silva Filho, S. Carlos B. Oliveira

Electrochemical Oxidation Mechanism of Ethidium Bromide at a Glassy Carbon Electrode

s10-004

Manuel Palomar-Pardavé (Department of Materiales, Universidad Autónoma Metropolitana Azcapotzalco, D.F., Mexico), María-Teresa Ramírez-Silva, Silvia Corona-Avendaño, Mario Romero Romo, Annia Galano, Alberto Rojas-Hernández, Axel Velasco, Angeles Cuán

Electrochemical evidence on the formation of surface inclusion complex of ascorbic acid with immobilized β-cyclodextrin and carbon nano tubes over a carbon paste electrode

s10-005

R. Salazar (Department of Environmental Sciences, Universidad de Santiago de Chile, Santiago, Chile), J. Vidal, M. Martínez-Cifuentes, R. Araya-Maturana, O. Ramírez-Rodríguez

Substituent effect on the electrochemical behavior of hydroquinone derivatives in acetonitrile media

s10-006

Emmamouil Symianakis (Department of Chemistry, Imperial College London, London, United Kingdom), Denis Kramer, Nigel Brandon, Tim Albrecht, Anthony Kucernak

Searching for stable Core-Shell catalysts from First Principles: The cases of Pt-Au and Pt-Ni nanoparticles

Symposium 12: Tradition to Modernity: Challenges at the Electrochemical Interface

Adsorption

s12-001

Jannu Casanova-Moreno (Chemistry Department, University of British Columbia, Vancouver, Canada), Dan Bizzotto

The Fate of Reductively Desorbed Thiolates from Self Assembled Monolayers

Electrocatalysis

s12-002

Janusz Flis (Dept. of Electrochemistry, Corrosion and Applied Surf Sci., Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland), Iwona Flis-Kabulska

Determination of Hydrogen Absorption in Iron Cathodes for Alkaline Water Electrolysis by Anodic Discharging and Electrochemical Permeation Technique

s12-003

Petr Krtil (Department of Electrocatalysis, J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Hana Hoffmannova, Olga Boytsova, Valery Petrykin

Oxygen Reduction on Doped Nanocrystalline MnO_2

s12-004

Elizaveta Kuznetsova (Department of Material Science and Engineering, NTNU, Trondheim, Norway), Petr Krtil, Svein Sunde

Design of the IrO_2-based catalysts for parallel oxygen and chlorine evolution: Tailoring of activity and selectivity by changing local structure of the catalysts

s12-005

Pucheng Pei (Department of Automotive Engineering, Tsinghua University, Beijing, China), Huachi Xu, Xia Zeng

In-Situ Measurement of the MEAs Consistency in Fuel Cell Stack

s12-006

Maria Alejandra Romero Moran (Department of Chemical Physical, Universidad Autónoma de Puebla, Puebla, Mexico)

Urea Oxidation on $Ni(OH)_2$/C-PVC and $Ni(OH)_2$/Ni-PVC Composite Electrodes

s12-007

Jozsef Speder (Department of Chemistry, University of Copenhagen, Copenhagen, Denmark), Markus Nesselberger, Matthias Arenz

Enhanced Oxygen Reduction Activity on PEM Fuel Cell Electrocatalysts via the Optimization of Electrical Interface

Electrochemical double layer phenomena

s12-008

Karmen Lust (Institute of Chemistry, University of Tartu, Tartu, Estonia), Vladislav Ivaništšev, Anton Ruzanov, Enn Lust

Comparative Impedance Analysis of Cd(0001)|$EMImBF_4$ and Cd(0001)|KI Aqueous Solution Interfaces at Different Temperatures

s12-009

Thaisa A. Baldo (Department of Physics, Chemistry and Biology, São Paulo State University (UNESP), Presidente Prudente, Brazil), Marcos F. S. Teixeira

Study of the Electronic Behavior of the Electrode Chemically Modified with SAMs Formed with Bromide 11 - Mercaptoundecil- N, N, N- Trimethylammonium

s12-010

Mariko Matsunaga (Department of Electrical, Electronic & Communication Eng., Chuo University, Tokyo, Japan), Kohei Kaji

Chiral Discrimination of 3,4-Dihydroxyphenylalanine by Electrodes Modified with Mesoporous Pt Film with a Large Number of Atomic Steps

Kinetics and mechanisms of electrode reactions

s12-011

Wojciech Adamiak (Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland), Dawid Kaluza, Marcin Opallo, Martin Jonsson-Niedziolka

Electro-Assisted Ion Extraction in a Microfluidic Chip

s12-012

Jingyuan Chen (University of Fukui, Fukui, Japan), Koichi Aoki, Xiaoyu Zhao, Jie Yu

Electrode reaction of bubbles, droplets and particles

s12-013

Alberto Gutiérrez-Becerra (Department of Chemistry, University of Guadalajara, Guadalajara, Mexico), Fernando Martínez-Matínez, N. Casillas, José I. Escalante, Maximiliano Barcena-Soto

Self-diffusion Coefficients of Reverse Microemulsions Measured by Microelectrode Cyclic Voltammetry

s12-014

Beomgyun Jeong (School of Environmental Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea), Hongrae Jeon, Jaeyoung Lee

Transient Activity Behavior of Bi-modified Pt Surfaces in Formic Acid Electrooxidation

s12-015

Renat Nazmutdinov (Department of Inorganic Chemistry, Kazan National Research Technological University, Kazan, Russia), Alexander Berezin, Oksana Ismailova, Michael Probst

Solvent Dynamics Effects in Heterogeneous Bond Breaking Electron Transfer: A New Challenge

s12-016

Viktoria Nikitina (Department of Electrochemistry, Moscow State University, Moscow, Russia), Sergey Kislenko, Renat Nazmutdinov, Galina Tsirlina

Specifics of Solvation and Electron Transfer Kinetics in Ionic Liquids

s12-017

Kevin Ogle (Department of Surfaces Engineering, Chimie Paris Tech PSL, Paris, France), Aurélien Duboin, Fabrice Monti, Patrick Tabeling, Polina Volovitch, Sophie Lebouil

Microfluidic tools for kinetic analysis of hydrogen evolution: Application to the anodic dissolution of Mg

s12-018

Jie Zhang (Department of Chemistry, Xiamen University, Xiamen, China), Zhong-Qun Tian, Zhaowu Tian

SECM Studies of Confined Etchant Layer Technique

Modern electrode materials

s12-019

Kentaro Suzuki (Department of Chemistry, Hokkaido University, Sapporo, Japan), Fumika Nagasawa, Satoshi Yasuda, Kei Murakoshi

Observation of Plasmon-Induced Water Oxidation Process at Au Nanostructures on Single Crystalline TiO_2 Electrode

Poster Session 2

Symposium 5: Corrosion Processes at the Nanoscale

Corrosion mechanisms

s05-001

Fe Alicia Borrego-Sarachaga (Department of Metalurgy, Universidad Nacional Autonoma de Mexico, Mexico D. F., Mexico), Bernard Tribollet, Vincent Vivier, Juan Genesca, Rosendo Rojas

Electrochemical impedance spectroscopy as a function of applied potential to study the behavior of galvanic pair aluminum – steel

s05-002

Jorge A. Calderon (Department of Materials Engineering, Universidad de Antioquia, Medellín, Colombia), Libia Baena, Julian Lenis

Electrochemical Study of the Corrosion of Metals Exposed to Biodiesel and Biodiesel – Fatty Acids Blends

s05-003

Rosario Chavez (Instituto de Ingenieria, Universidad Veracruzana, Boca del Rio, Mexico), Bernard Tribollet, Juan Genesca, Gonzalo Galicia, Ricardo Orozco

Corrosion study of Al-Zn-Mg alloys by electrochemical impedance spectroscopy as a function of potential and flow condition

s05-004

Jardel Dantas da Cunha (Department of Engineering of Petroleum, Federal University of Rio Grande do Norte, Natal, Brazil), Maiara Barbosa Ferreira, Fernando Nunes da Silva, Weldson Oliveira de Santana, Carlos Alberto Martinez-Huitle, Djalma Ribeiro da Silva

Influence of Magnesium in Aluminum Alloys - Class 6000 used in Brazilian Petrochemical Industry

s05-005

Francisco Estupiñan (Materiales y Estructuras Aeroespaciales, CIIIA-FIEM-UANL, APODACA, Mexico), Facundo Almeraya, Citlalli Gaona, Patricia Zambrano, Jose Angel Cabral Miramontes

Electrochemical evaluation of pitting corrosion in stainless steels duplex 2205 by polarization cyclic potentiodinamyc in $FeCl_3$

s05-006

Carlos Alberto González Rodríguez (División de Ingeniería Mecánica Electrónica, Tultitlan, Mexico), Francisco Javier Rodríguez Gomez, Héctor Cruz Mejía

Influence of Desulfovibrio vulgaris growth in the mechanism of corrosion of a low carbon steel

s05-007

Elton Oliveira (Department of Chemical Engineering, Polytechnic School, São Paulo University, São Paulo, Brazil), Aline Neves de Azevedo, Hercílio Gomes de Melo

Investigation of the effect of the addition of Cu corrosion inhibitors on the corrosion behavior of high strength Al alloys in chloride containing solution

s05-008

Gabriela Karina Pedraza Basulto (Corrosion and Protection, CIMAV, Chihuahua, Mexico), Ana Maria Arizmendi Morquecho, Facundo Almeraya, Jose Angel Cabral Miramontes, José Guadalupe Chacon Nava

Stress Corrosion Cracking Behavior of API 5L-X52 Steel in E95 and E10 Blend

s05-009

Daniel Perez (Materiales y Estructuras Aeroespaciales, CIIIA-FIEM-UANL, APODACA, Mexico), Citlalli Gaona, Miriam Aguilar, Patricia Zambrano, Francisco Estupiñan, Facundo Almeraya

Electrochemical Noise Analysis of Nickel Based Superalloys

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Edelmira Rodriguez-Clemente (Department of CIICAp, Universidad Autonomad del Estado de Morelos, Cuernavaca, Mexico), J. Gonzalo Gonzalez-Rodriguez, Maria Guadalupe Valladares-Cisneros, America Maria Ramirez-Arteaga, José Guadalupe Chacon Nava, Rene Guardian-Tapia

Corrosion inhibition of carbon Steel 1018 in sulphuric acid medium by different organic extract of Allium sativum

s05-011

Estela Sarmiento Bustos (Division Academica de Mecanica Industrial, Universidad Tecnologica Emiliano Zapata del Edo. de Morelos, Emiliano Zapata, Mexico), Marco Hernandez-Escampa, Fausto Rodriguez-Acuña, Jorge Uruchurtu, Oscar Sarmiento-Martinez, Oscar Dominguez-Perez

Atmospheric Corrosion in the State of Morelos, Mexico: Contributions to Infrastructure and Cultural Heritage Conservation

s05-012

Victor Vega (Laboratorio de Materiales, Centro de Investigacion y Desarrollo en Electroquimica, Queretaro, Mexico), Daniel Gomez, Ximing Li, Omar Rosas, Homero Castaneda

Development of Transport Properties for Soil Corrosivity in Buried Pipeline Steel/Coating Prototypes

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Yingchao Yu (Chemistry and Chemical Biology, Cornell University, Ithaca, USA), Megan Holtz, Huolin Xin, Deli Wang, David Muller, Hector Abruna

Imaging Pt-Co Catalysts Electrochemical Corrosion Process by *In-Situ* Electron Microscopy

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Griselda Zambrano-Rengel (Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico)

Electrochemical Characterization of Ceramic Nanoparticles as Containers for Cooper Corrosion Inhibitor

Nanoscale dissolution

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Fausto Rodriguez-Acuña (Departamento de Ingeniería Metalúrgica, Facultad de Química, UNAM, Mexico, D.F., Mexico), Juan Genesca, Marco Hernandez-Escampa, Jorge Uruchurtu

Correlation of Microstructure and Electrochemical Behavior in High Tin Historic and Modern Bell Bronzes

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Elvia Teran Salgado (Centro de Investigacion en Ingenieria y Ciencias Aplicadas, Universidad Autonoma Del Estado De Morelos, Cuernavaca, Mexico), Cecilia Cuevas-Arteaga

Electrochemical Synthesis of TiO_2 Nanostructures

Passivity

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Luís Frederico P. Dick (Departamento de Metalurgia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil), Sabrina Neves da Silva

SVET with Simultaneous Straining for *in situ* Study of The Stress Corrosion Craking of API 5L X65 Steel

s05-018

Esteban Garcia-Ochoa (Centro de investigaciones en Corrosion, Universidad Autonoma de Campeche, Campeche, Mexico)

Fractal geometry using electrochemical noise (EN) and image analysis

s05-019

Fatima Montemor (DEQ, Instituto Superior Tecnico, Lisboa, Portugal)

Electrochemical Frequency Modulation Applied to the Study of Corrosion Inhibition of Reinforcing Steel in Electrolytes Simulating Concrete

Surface treatments

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Assis Vicente Benedetti (Department of Physical Chemistry, Universidade Estadual Paulista Julio Mesquita Filho, Araraquara, Brazil), Cecilio Sadao Fugivara, Jessica Verger Nardeli

Environmentally Friendly Coatings Applied on Aluminum Alloy ASTM 1200

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B. Brachetti-Sibaja (Department of Materials, IPN CICATA Altamira, Altamira, Mexico), Miguel Antonio Dominguez Crespo, S. E. Rodil-Posada, Aidé Minerva Torres-Huerta

Comparison of inhibition properties of CeO_2 and La_2O_3 thin films synthesized by r.f. magnetron sputtering on different aluminium alloys

s05-022

Jose Cabral Miramontes (Deteriorating and Integrity of Composite Materials, Universidad Autónoma de Nuevo León, Monterrey, Mexico), Facundo Almeraya, Patricia Zambrano, Oscar Barceinas Sanchez, Francisco Espinoza Beltrán, Gabriela Karina Pedraza Basulto, Carlos Poblano Salas

Characterization of the mechanical properties of a bimodal WC-VC-Co coating by thermal spraying processing HVOF

s05-023

Jorge A. Calderon (Department of Materials Engineering, Universidad de Antioquia, Medellín, Colombia), Franky Bedoya, Angela Bermudez, Juan Castaño, Juan Maya, Félix Echeverría

Modeling of Long Term Performances of Anticorrosive Coatings by Accelerated Tests and Electrochemical Impedance Spectroscopy

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Araceli Espinoza Vazquez (Department of Chemistry and Materials, Universidad Autonoma Metropolitana-Azcapotzalco, Mexico, Mexico), Guillermo E. Negrón Silva, Deyanira Angeles Beltran, Manuel Palomar-Pardavé, Mario Romero Romo, Hector Herrera Hernández

Thermodynamic and Kinetic Parameters of Corrosion Inhibition of Steel in 1M HCl using Fluconazol as Inhibitor

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Araceli Espinoza Vazquez (Department Materiales y Ciencias Basicas, Universidad Autonoma Metropolitana-Azcapotzalco, Mexico, Mexico), Guillermo E. Negrón Silva, Rodrigo González Olvera, Deyanira Angeles Beltran, Hector Herrera Hernández, Mario Romero Romo, Manuel Palomar-Pardavé

Inhibition of Mild Steel Corrosion in HCl by Di-Alkyl and Di-1,2,3-Triazole Derivatives of Uracile and Thymine

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Iwona Flis-Kabulska (Dept. of Electrochem., Corrosion and Applied Surf. Sci., Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland), Janusz Flis, Tadeusz Zakroczymski

Antimony Microelectrode for Facile Measurements of the Near-Surface pH. Identification of Electrode Processes Involving Protons

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América García Delgado (CIAMS, IPN CICATA-Altamira, Altamira, Mexico), Edgar Onofre Bustamante, Jorge Aurelio Lois Correa, Aidé Minerva Torres-Huerta, Miguel Antonio Dominguez Crespo

Electrochemical Assessment Of Steel-Concrete Reinforced System Modified With Natural Fibers For Its Anticorrosion Protection

s05-028

José Luis Gutierrez Díaz (Centro de Investigación en Ingeniería y Ciencias Aplicadas, Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico), Jorge Uruchurtu

Composite formed of polythiophene derivative, ash and ferric nitrate as smart coating against corrosion

s05-029

J. Daniel Gómez (Department of Industrial Projects, CIDETEQ, S. C., Querétaro, Mexico), Victor Vega, Jaime Gutiérrez

Evaluation of three Organic Coatings for Underground Pipelines through Electrochemical Impedance Spectroscopy (EIS) and Cyclic Corrosion Tests

s05-030

Laura Hernández Alvarado (Department of Chemistry, Universidad Autónoma de San Luis Potosi, San Luis Potosi, Mexico), Luis S. Hernández, Maria Lorenza Escudero Rincón

Phytic Acid Coatings on Mg and AZ31 Mg Alloy

s05-031

Enrique Hernández Sánchez (Department of Materials, Universidad Autónoma Metropolitana-Azcapotzalco, México, Mexico), Mario Romero Romo, Manuel Palomar-Pardavé, Iván Campos Silva, Jaime Hernández Sánchez, Rafael Carrera Espinoza

On the corrosion resistance of borided AISI 316L steel type exposed to a biological solution

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Dallely Melissa Herrera Zamora (Department of Applied Physics, Center for Investigation and Advance Studies of IPN, Mérida, Mexico), Lucien Veleva

Analysis of Electrochemical Noise of the Corrosion Potential in Early Stages of AISI 304 Stainless Steel Exposed to Stationary Seawater

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Adriana Montiel García (CIAMS, CICATA-UA, Altamira, Mexico), Edgar Onofre Bustamante, Aidé Minerva Torres-Huerta, Miguel Antonio Dominguez Crespo

Electrochemical Evaluation of Chemical Conversion Treatments on Steel Reinforcement

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Sungmo Moon (Surface Engineering Division, Korea Institute of Materials Science, Changwon, Korea), Doyon Chang, Sangyeol Lee

Chemical Conversion Coatings Formed on AZ31 Mg Alloy

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Adrian Perez Jerez (CIAMS, CICATA-UA, Altamira, Mexico), Edgar Onofre Bustamante, Miguel Antonio Dominguez Crespo, Aidé Minerva Torres-Huerta

Chemical Treatment Conversion on Bluing Sealing With Cerium on Carbon Steel

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Josephine Quirino-Gutiérrez (Área Académica de Ciencias de la Tierra y Materiales, Universidad Autónoma del Estado de Hidalgo, Pachuca, Mexico), Victor Esteban Reyes Cruz

Electrochemical study of the pitting reproducibility

s05-037

Juan Radilla (Department of Basics Science, UAM-Azcapotzalco, Mexico, Mexico), Guillermo E. Negrón Silva, Manuel Palomar-Pardavé, Mario Romero Romo, Marcelo Galvan

Dft study of the adsorption of the corrosion inhibitor 2mercaptoimidazole onto Fe(100) surface

s05-038

José Manuel Ramírez-Herrera (Department of Metalurgy, UNAM, Mexico DF, Mexico), Francisco J. Rodríguez, Ricardo Galvan

Surface modified magnesium alloys by chemical treatments. Applications biomaterials

s05-039

Ildefonso Zamudio (Department of Electrochemistry, CIDETEQ, Querétaro, Mexico), Celeste Torres, José de Jesús Pérez, Yunny Meas, René Antaño, Erika Bustos

Ti Electrodes with TiO_2 Nanotubes Surfaces as anodes in Electroremediation of Soils

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Frank U. Renner (Interface Chemistry and Surface Engineering, Max-Planck Institut für Eisenforschung GmbH, Düsseldorf, Germany) Julia Klemm, Karl Mayrhofer, Pyuk-Pa Choi, Aleksander Kostka, Dierk Raabe, Milad Madinehei, M. Jazmin Duarte Correa

Element-resolved Corrosion Analysis of Gradually Devitrified Amorphous Steels

Symposium 6: Conducting Polymers, Inorganic Materials, and their Hybrids for Electrocatalysis and Photoelectrochemical Energy Conversion

(Photo)electrocatalysis

s06-001

Jacqueline Arguello (Inorganic Chemistry, UFRGS, Porto Alegre, Brazil), Icaro A. Simon, Rosane M. Duarte Soares, Ketlin Correia Garcia, Clarisse M. S. Piatnicki

Amperometric Detection of Glucose and Glycerol Using CuO Nanofibers/PIGE Electrode

s06-002

Shen-Ming Chen (Department of Chemical Engineering and Biotechnology, National Taipei University of Technology, Taipei, Taiwan), Cheng-Yu Yang, Kuo-Chiang Lin, Tsung-Hsuan Tsai

Fabrication of Conducting Polymer and Inorganic Material Modified Electrodes for Dye-Sensitized Solar Cells and Electrochemical Sensing Applications

s06-003

Andrés Gualdrón (Department of Chemistry, Universidad Industrial de Santander, Bucaramanga, Colombia), Angel Meléndez, Martha Niño

Boron-doped TiO_2/graphene for enhanced photoelectrochemical phenol oxidation under visible light

s06-004

Yi Liu (Department of Chemistry and Chemical Biology, Harvard University, Cambridge, USA), Daniel Nocera

Structural and Mechanistic Insights of Cobalt-based Electrocatalyst towards Oxygen Evolution Reaction

s06-005

Francisco Javier Recio (Department of Materials Science, Universidad Santiago de Chile, Santiago, Chile), Manuel Becerra, Alexander Sandoval, Federico Tasca, Juan Francisco Silva, José Zagal

Stability of FePc as catalyst of oxygen reduction reaction

Film deposition methods

s06-006

Ali Ehsani (Department of Chemistry, Qom University, Qom, Iran)

Electrochemical impedance spectroscopy study of ion diffusion in restricted area

s06-007

Ricardo Ariel Fernández (Depto. de Química Fundamental, Instituto de Química Universidade de São Paulo, São Paulo, Brazil), Tânia Benedetti, Roberto Torresi

A comparative study of the electrodeposition of polypyrrole from protic and aprotic ionic liquids

s06-008

Wesley Okiei (Department of Chemistry, University of Lagos, Lagos, Nigeria), Modupe Ogunlesi, Sulaiman Akanmu

Effect of Sodium Chloride as Dopant on Polyaniline – Modified Glassy Carbon Electrode and its Application in the Electroanalysis of Haemoglobins

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Functional Materials

s06-009

Maria Carmezim (DEM, Instituto Politecnico de Setubal, Setubal, Portugal), Rui Silva, Sonia Eugenio, Teresa Silva, Fatima Montemor

Fabrication of Composite CoNi Dendritic Films for Supercapacitors Electrodes

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María Olga Concha Guzmán (Tecnología de Materiales, CIICAp-UAEM, Cuernavaca, Morelos, Mexico), Marina E. Rincón, Carmina Menchaca, Jorge Uruchurtu

Effect of Roughness on the Electrochemical Reduction of TiO_2-GO Electrodes

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Gregory Jerkiewicz (Department of Chemistry, Queen's University, Kingston, Canada), Michal Grden, Mohammad Alsabet, Julia Van Drunen

Nickel Foams and Their Electrochemical, Materials Science and Surface Science Characteristics

s06-012

Kwang Bum Kim (Department of Material Science and Engineering, Yonsei University, Seoul, Korea), Jong-Pil Jegal, Suk Woo Lee, Hyunkyung Kim

Oxide/Graphene Nanocomposite Functional Materials

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Joanna Niedziolka-Jonsson (Department of Electrode Processes, Institute of Physical Chemistry, PAS, Warsaw, Poland), Izabela Kaminska, Marcin Opallo, Adam Laszcz, Andrzej Czerwinski

(Bio)electrocatalysis at Indium Tin Oxide Nanoparticulate Film Decorated with Gold

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Luz Maria Torres Rodríguez (Facultad de Ciecias Químicas, UASLP, San Luis Potosí, Mexico)

Preparation and characterization of cation exchange membranes CMX modified with electrochemically synthesized polypyrrole of two different morphologies

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Nianxing Wang (Department of Chemistry, University of Turku, Turku, Finland)

Polyviologens: Electrochemical and Spectroscopic Properties

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Christian David Zuluaga Escobar (School of Processes and Energy, Universidad Nacional, Medellín, Colombia), Carlos Ignacio Sánchez Sáenz

Modeling of the Behavior of an Anticorrosive with EIS in Field Exposure

s06-017

Roxana Arce (Departamento Química de los Materiales, Universidad de Santiago de Chile, Santiago, Chile), Maria Aguirre, Julio Romero

Preparation and formation of modified electrodes by copolymerization of cobalto porphyrin and aniline and / or ortho-phenylenediamine

s06-018

Loreto Hernandez (Department of Inorganic Chemistry, Pontificia Universidad Catolica de Chile, Santiago, Chile), Maria Angelica del Valle, Francisco Armijo, Andrea Ramos, Beatriz Gonzalez

Electrosynthesis of Nano-wires of Poly (1-amine-9,10-anthraquinone) on Poly(1-amine-9,10-anthraquinone-co-o-phenylenediamine)

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Paula Llanquileo (Department of Inorganic Chemistry, Pontificia Universidad Catolica de Chile, Santiago, Chile), R. Montecinos, G. C. Arteaga, Maria Angelica del Valle, Monica Antilen

Experimental and Computational Study of the Electrochemical Properties of Thiophene and Pyrrole Derivatives

Photocatalysts

s06-020

Francisco Cataño (Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile), Humberto Gomez, Enrique Dalchiele, Ricardo Marotti

Morphological effects on photocatalytic activity of zinc oxide electrodeposits

Solar energy and alternative fuels

s06-021

Esdras Josué Canto Aguilar (Department of Applied Physics, CINVESTAV-IPN, Mérida, Mexico), Gerko Oskam

Study on the performance of a cobalt complex as redox couple in DSSCs based on ZnO thin films obtained by electrochemical methods

s06-022

Alfredo Del Oso (Department of Science and Technology, Universidad Autónoma de la Ciudad de México (UACM), México, Mexico), Bernardo A. Frontana-Uribe, Gabriela Roa Morales, José-Luis Maldonado

Electrochemical and UV-Vis Response Comparison of Poly-3,4-ethylenedioxythiophene (PEDOT) Electropolymerized in Different Organic Solvent Mixtures on ITO Electrodes

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Rodrigo García Rodríguez (Department of Applied Physics, Cinvestav-IPN, Mérida, Mexico), Gerko Oskam

Study of Transport and Recombination Properties of Dye-Sensitized Solar Cells as a Function of Morphology and Redox Couple using Electrochemical Impedance Spectroscopy

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Edwin Oseguera (Department of Chemical Engineering, ESIQIE-IPN, Mexico DF, Mexico), Claudia Cortés, Miguel Tufiño, Gerardo Contreras

Solar-Hydrogen Production Hybrid System: Renewable Energy-Hydrogen System

Solar Energy Materials

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Pushpa Chhetri (Department of Chemistry, University of Nevada, Reno, USA), Neluni Perera

Study of Band Structure of ZnO Nanowires

s06-026

Susana Cordoba de Torresi (Instituto de Quimica, Universidade de São Paulo, São Paulo, Brazil), Tatiana Augusto, Marcio Vidotti, Erico Teixeira Neto, Angela Teixeira Neto

Metal-conducting polymer hybrid nanoparticles for optical devices

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Humberto Gomez (Instituto de Quimica, Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile), Ricardo Schrebler, Rodrigo Henriquez, Gonzalo Riveros, Daniel Ramirez

Electrodeposition of ZnO nanowires from DMSO solutions on porous alumina membranes: Evaluation of their performance in dye sensitized solar cells

s06-028

Oscar Andrés Jaramillo Quintero (Solar Materials, Instituto de Energías Renovables, Temixco, Mexico), Mirna Ramirez-Vargas, Mauricio Solis de la Fuente, Tonahtiuh Rendón, Marina E. Rincón

Effect of Annealing on the Surface Potential of TiO_2 Nanowires and Nanotubes

s06-029

Luz María Lazo (Department of Organic Chemistry, Electrochemistry Lab., Centro Conjunto de Investigación en Química Sustentable, Toluca, Mexico), Bernardo A. Frontana-Uribe, A. Laura Gonzalez Mendoza

Synthesis and electropolymerization of low band gap polymer based on 4,7-Di (thiophen-2-yl)-benzo[c] [1,2,5]thiadiazole, (DTBT), for photovoltaic application

s06-030

Humberto Mandujano-Ramírez (Department of Applied Physics, CINVESTAV-IPN, Mérida, Mexico), Gerko Oskam, J.P. González-Vázquez, Juan A. Anta

Random Walk Numerical Simulation of Disordered Semiconductor Heterojunctions

s06-031

Natalia Mayorova (Department of Processes in Batteries, Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow, Russia), Vitali Grinberg, Sergei Kozyukhin, Victor Emets, Vladimir Andreev

Cyclometallized Ruthenium (II) Complex as a New Type of Sensitizer for Dye-Sensitized Solar Cells

Synthesis and characterization

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Mario Alpuche-Aviles (Department of Chemistry, University of Nevada, Reno, USA), Neluni Perera, Nelum Karunathilake, Pushpa Chhetri

Reduction of Zinc Oxide Nanoparticles at a Mercury Microelectrode

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Jacqueline Arguello (Inorganic Chemistry, UFRGS, Porto Alegre, Brazil), Stéfano R. Marquetto, Clarisse M. S. Piatnicki

Electrochemical Synthesis of Bottles-like Polypyrrole Microstructures

s06-034

María Olga Concha Guzmán (Tecnología de Materiales, CIICAp-UAEM, Cuernavaca, Morelos, Mexico), Marina E. Rincón, Carmina Menchaca, Jorge Uruchurtu

Effect of pH on the Electrochemical Reduction of TiO_2-GO Electrodes

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D. Del Angel-López (Department of Materials, IPN CICATA AltamirA, Altamira, Mexico), Miguel Antonio Dominguez Crespo, Aidé Minerva Torres-Huerta, J. Andraca-Adame, H. Dorantes-Rosales

Analysis of degradation process during the incorporationof ZrO_2:SiO_2 ceramic nanostructures into polyurethane coatings for the corrosion protection of carbon steel

s06-036

Francesco Di Franco (Electrochemical Material Science LAboratory-DICAM, Università di Palermo, Palermo, Italy), Roberto Macaluso, Mauro Mosca, Claudio Calì, Monica Santamaria, Francesco Di Quarto, Jean Luc Reverchon

Electrochemical methods for carrier type identification of ZnO films grown by pulsed laser deposition on InP

s06-037

Claudia Carina Pareja Rivera (Department of Chemistry, Universidad Autónoma del Estado de México, Toluca, Mexico), Marco Antonio Camacho López

Synthesis and Design of a Modified Anode Based on ZnO Nanorods and Gold Nanoparticles for its Application in Photoelectrochemical Solar Cells

s06-038

Emese Peintler-Krivan (Department of Physical Chemistry and Materials Science, University of Szeged, Szeged, Hungary), Balázs Endrödi, Ditta Ungor, Zoltán Németh, Csaba Visy

Synthesis and Characterization of Nanostructured ZnO/Conducting Polymer Composites for Photovoltaic Applications

s06-039

Guy Stremsdoerfer (Laboratory of Tribology and System Dynamics (LTDS), Ecole Centrale de Lyon, Lyon, France), Monserrat Gutiérrez-Munoz, Yunny Meas, René Antaño, J..J. Pérez-Bueno

Evaluation of corrosion protection of metals for hybrids coatings by comparing LPR / EIS / EFM techniques

s06-040

Laura Luz Valero (Center for Electrochemistry and Intelligent Materials, Universidad Politécnica de Cartagena-UAEM, Cartagena, Spain), Toribio F. Otero, Jose G. Martínez, Héctor Alcántara

Artificial muscles: Apparent solvation number of cations during reaction

Symposium 7: Electrochemical Processes for Advanced Materials Synthesis

Alloys

s07-001

Ivan Alejandro Muñoz (CIAMS, CICATA-UA, Altamira, Mexico), Edgar Onofre Bustamante, Ma. Cristina García Alonso, Maria Lorenza Escudero Rincón, Aidé Minerva Torres-Huerta

New Alternatives Biocompatible Coatings Obtained By Chemical Conversion On TiAlV Alloys

Anodization

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Federico Bella (Department of Applied Science and Technology, Politecnico di Torino, Torino, Italy), Andrea Lamberti, Nadia Garino, Katarzyna Bejtka, Stefano Bianco, Diego Manfredi, Elisa Paola Ambrosio, Mariangela Lombardi, Candido Fabrizio Pirri, Marzia Quaglio

$BaTiO_3$ Nanotube Arrays by Hydrothermal Conversion of TiO_2 Nanotube Carpets Grown by Anodic Oxidation

s07-003

Juan Carlos Morales Gomero (Facultad de Ingeniería Industrial, Facultad de Ciencias, Universidad de Lima, Universidad Nacional de Ingeniería, Lima, Peru), Darío Eder Lazo Hoyos, Juliano Carvalho Cardoso, Guilherme Garcia Bessegato, Silvia Ponce Álvarez, Maria Boldrin Zanoni

Anodic formation of ordered TiO_2 nanotubes arrays: Effects of HF concentration, time and potential applied anodization in the dimensions of the nanotubes

s07-004

Jorge Zerbino (CIC, INIFTA, La Plata, Argentina), Liliana Gassa, Ariel Meyra, Maria Sustersic

The gold oxide grown in the confined aqueous layer in contact with chloroform

Electrodeposition

s07-005

Ivan Aldana (Department of Materials, UAM-Azcapotzalco, Mexico, Mexico), M.G. Montes de Oca-Yemha, Mario Romero Romo, María-Teresa Ramírez-Silva, Manuel Palomar-Pardavé

Electrochemical deposition of copper onto 3d networks of gold nanostructures

s07-006

Yennifer Arauz (Department of Chemical and Biochemical Engineering, Tecnologico de Estudios Superiores de Ecatepec, Mexico, Mexico), Martin Cruz-Diaz, Francisco Caballero, Gisela García, Ignacio González, Gretchen Lapidus

Synthesis of MnO_2 from waste alkaline battery through ozonation in an airlift column

s07-007

Francisco V. Caballero-Domínguez (División de Ingeniería Química y Bioquímica, Tecnológico de Estudios Superiores de Ecatepec, Ecatepec de Morelos, Mexico), Martin Cruz-Diaz, Francisco Almazán, Eligio Rivero, Ignacio González

Analyzing a Multimodal Closed Loop Control in a continuous RCE Reactor

s07-008

Sheng-Pei Chen (Department of Chemistry, Xiamen University, Xiamen, China), Jie-Lian Ou, Yan-Xin Chen, Rui Huang, Yuan-Rong Cai, Shi-Gang Sun

Preparation and Characterization of CoNi Alloy Nanoparticles and Their Electrocatalytic Properties

s07-009

Margarita Dergacheva (Department of Electrochemical Technology, Institute of Organical Catalysis and Electrochemistry, Almaty, Kazakhstan), Kseniya Mayeva, Kazhmukan Urazov

The CdS electrodeposition on glass carbon electrode at illumination

s07-010

M.A. Estrella-Gutiérrez (Department of Applied Physics, CINVESTAV-IPN, Mérida, Mexico), Iván Lizama-Tzec, Gerko Oskam, Oscar Arés

Electrodeposition and characterization of selective solar absorber coatings from bright and black nickel

s07-011

F. I. Lizama-Tzec (Department of Applied Physics, CINVESTAV-IPN, Mérida, Mexico), M.A. Estrella-Gutiérrez, Oscar Arés, D. Macías, J.J. Alvarado, R. Coss-Gómez, Gerko Oskam

Electrodeposition of Nickel Oxide for Solar Collector Applications

s07-012

F. I. Lizama-Tzec (Department of Applied Physics, CINVESTAV-IPN, Mérida, Mexico), M.A. Estrella-Gutiérrez, Oscar Arés, D. Macías, J.J. Alvarado, R. Coss-Gómez, Gerko Oskam

Electrodeposition and Characterization of Nickel Oxide on Stainless Steel

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Juan Ramón López (CIDETEQ, Pedro Escobedo, Mexico), Guy Stremsdoerfer, René Antaño, José de Jesús Pérez

The effect of boron content, crystal structure and crystal size on the hardness of electrodeposited Ni-B coatings obtained from a sulfamate bath

s07-014

Zulema Ángela Mahmud (INTI Procesos Superficiales, INTI, Argentina, Argentina), Franco Amelotti, Norma Mingolo, Liliana Gassa, Paulo Tulio, Gabriel Gordillo

Relationship between thickness and textures for characterizing the zinc alloy coating with ceramic particles

s07-015

Michele Mascia (Department of Mechanical, Chemical and Materials Engineering, University of Cagliari, Cagliari, Italy), Laura Mais, Annalisa Vacca, Simonetta Palmas

On the Electroreduction of Niobium from Ionic Liquid at Different Temperatures.

s07-016

Michele Mascia (Dipartimento di Ingegneria Meccanica Chimica e dei Materiali, Università degli Studi di Cagliari, Cagliari, Italy), Annalisa Vacca, Simonetta Palmas, Laura Mais, Simone Rizzardini

Electrochemical behaviour of Nb, Ta, Zr, and W in pyrrolidinium-based ionic liquid

s07-017

Hiroshi Matsubara (Department of Materials Science and Technology, Nagaoka University of Technology, Nagaoka, Japan), Naoki Horikiri, Hiroshi Nishiyama, Kazunori Hodouchi

Incorporation Mechanism of Colloidal TiO_2 Nanoparticles into Electrolessly-Plated Ni Films

s07-018

Luis H. Mendoza-Huizar (Department of Chemistry, Universidad Autónoma del Estado de Hidalgo, Mineral de la Reforma, Mexico)

Electrodeposition of Magnetic Cobalt Nanoclusters from Ammonical Solutions on HOPG Electrodes. A Kinetical and Morphological Study

s07-019

Milagro Yesenia Montilla Davila (Department of Quimica, Universidad de los Andes (NUAA), El Vigia, Venezuela), Domingo Alberto Alarcon, Reynaldo Luis Ortiz Ramos, Noryley Suescun

CdTe binary semiconductor electrodeposition in presence of Fe^{3+}

s07-020

Taichi Nagai (Materials Science and Technology, Nagaoka University of Technology, Nagaoka, Japan), Hiroshi Nishiyama, Kazunori Hodouchi, Hiroshi Matsubara

Effect of Film Composition on Hardness of Ni-W-B Plated Films

s07-021

Maguy Nahra (Department of LEPMI, INP, Grenoble, France), Eric Chainet, Lenka Svecova

Physicochemical properties of RTIL used as electrolytes for refractory metal electrodeposition

s07-022

Hector Ortiz (Department of Electrochemistry, Universidad Autonoma Metropolitana-Iztapalapa, Mexico D.F., Mexico), Margarita Miranda-Hernández, Jorge Vazquez-Arenas, Ignacio González

The effects of gelatin in the nucleation and growth of Zinc on commercial aluminum from high concentrate acidic sulfate electrolytes containing 1.14 M Zn (II)

s07-023

Kyung Ju Park (School of Chemical and Biological Engineering, Seoul National University, Seoul, Korea), Taeho Lim, Myung Jun Kim, Kang Uk Lee

In-situ Transmittance Measurement for Characterization of Organic Additives in Cu Electroless Deposition

Etching

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Antonio Mendez-Blas (Department of Applied Physics, Instituto de Fisica, Universidad Autonoma de Puebla, Puebla, Mexico), Laura Elvira Serrano, Ma. Estela Calixto

Fabrication of Self-Sustained Porous Silicon Layers by Using an Improved Electrochemical Double-Step Pulsed Separation Method

Films

s07-025

Lida Vianney Aguilar-Vargas (Department of Química, Universidad Autónoma Metropolitana-Iztapalapa, México, Mexico), Jaime S. Valente, Ignacio González

Electrodes modified with Layered Double Hydroxides (LDH) for oxidation of Indigo Carmine dye

s07-026

Domingo Alberto Alarcon (Department of Quimica, Universidad de los Andes (NUAA), El Vigia, Venezuela), Milagro Yesenia Montilla Davila, Reynaldo Luis Ortiz Ramos, Noryley Suescun

Electrochemical preparation of the ternary semiconductor CuxPbySe to pH 3

s07-027

Claudio Gervasi (INIFTA, University of La Plata, La Plata, Argentina)

Conformational and Thermal Transitions of PMETAC Brushes in NaCl and $NaClO_4$ Solutions

s07-028

Vinicius Gonçales (Department of Fundamental Chemistry, University of São Paulo, São Paulo, Brazil), Layane Rego, Jadielson Antonio, Susana Cordoba de Torresi

Thin Films of Conducting Polymers with Tubular Structure through Template Synthesis

s07-029

María Rosalina Pérez García (Department of Energy, Universidad Politécnica Metropolitana de Hidalgo (UPMH), Tolcayuca, Mexico), Mercedes Teresita Oropeza Guzmán, Jan B. Talbot, Edgar Butron-Vargas, Juan Manríquez Rocha

Electrophoretic Deposition as a New Technique to Fabricate DSA Electrocatalysts for Water Treatment

s07-030

Davide Rosestolato (Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara, Italy), Jacopo Fregoni, Sergio Ferro, Giancarlo Battaglin, Achille De Battisti

The Chlorine Evolution Reaction as Diagnostic Method for characterizing Iridium Oxide-based Electrodes

s07-031

Drochss Valencia (Department of Chemistry, University of Sao Paulo, Sao Paulo, Brazil), Ana Paula Ruas de Souza, Mauro Bertotti

From planar electrode to microelectrodes ensembles by modification of gold and copper surfaces through electrochemical reduction of 5-bromo-1,10-phenanthroline

s07-032

Agustin Bolzan (Electrochemistry, Instituto de Inv. Fisicoquímicas Teóricas y Aplicadas, La Plata, Argentina)

Nucleation and growth of copper films on glassy carbon

s07-033

Juan Edgar Carrera-Crespo (Department of Chemistry, Universidad Autónoma Metropolitana, Ciudad de México, Mexico), Próspero Acevedo-Peña, Margarita Miranda-Hernández, Ignacio González

Effect of supporting electrolyte in the electrocrystallization of Cadmium on anodically formed TiO_2

s07-034

Jooyul Lee (Department of Electrochemistry, Korea Institute of Materials Science, Changwon, Korea), Man Kim, Kyu Hwan Lee

Fabrication of Semi-transparent Pure Copper Electrode Using Electrodeposition/Transfer Process

Nanostructures

s07-035

Marian Angeles Abellan (Instituto de Química, Universidad Pontificia Católica de Valparaiso, Valparaiso, Chile), Ricardo Schrebler, Bernabe Marí, Paula Cembrero

Comparative study of the structural and semiconductors properties of FTO/ Bi_2Te_3/CdTe and FTO/CdTe

s07-036

Suresh Kumar Aggarwal (Department of Atomic Energy, BARC, Fuel Chemistry Division, BARC, Mumbai, India), Ruma Gupta

Electrochemical Studies on Utilization of Single Walled Carbon Nanotube Modified Gold Electrode for Determination of Uranium and Plutonium

s07-037

Ivan Aldana (Department of Materiales, Universidad Autónoma Metropolitana Azcapotzalco, México, Mexico)

Gold Nanoparticles Modified-ITO Electrode for the Selective Electrochemical Quantification of Dopamine in the Presence of Uric and Ascorbic acids

s07-038

Earving Arciga Duran (Instituto Tecnológico de Lázaro Cárdenas, Lázaro Cárdenas, Mexico), Josue Osvaldo Luna Monteñez, Gerardo Ortiz Rodriguez, Juan Carlos Ballesteros Pacheco

Determination of Nucleation Mechanism for the Production of Nanostructures ZnO by Electrochemical Process

s07-039

Stanko Brankovic (University of Houston, Houston, USA), Qiyui Yuan, Milan Slavkovic, Ashish Tripathi, Lars Grabow

Morphology Effects on Electrosorption Properties of Catalyst Monolayers

s07-040

Samuel De La Luz-Merino (Instituto de Fisica, Benemerita Universidad Autonoma de Puebla, Puebla, Mexico), Ma. Estela Calixto, Antonio Mendez-Blas

Nanostructured $CuInSe_2$ Prepared on Porous Silicon Templates by Electrodeposition

s07-041

Francesco Di Franco (Electrochemical Material Science Laboratory-DICAM, Università di Palermo, Palermo, Italy), Giorgio Conigliaro, Monica Santamaria, Francesco Di Quarto

Electrochemical fabrication of Cu_2O/TiO_2 nanotubes junctions with visible light photoactivity

s07-042

Sandra Jazmin Figueroa Ramirez (Materiales Solares, Instituto de Enegías Renovables-UNAM, Temixco, Mexico), Margarita Miranda-Hernández

Evaluation of electroactive area of porous carbon film electrodes

s07-043

Hugo Herrera (Centro de Investigación en Ingeniería y Ciencias Aplicadas, Universidad Autónoma del Estado de Morelos, Cuernavaca, Mexico), Cecilia Cuevas-Arteaga

Sinthesis of TiO_2 Nanoporous. Electrical and Mechanical Characterization

s07-044

Ezequiel Leiva (Department of Mathematics and Physics, INFIQC, Universidad Nacional de Córdoba, Córdoba, Argentina), Oscar Oviedo, Oscar Pinto, Luis Reinaudi

On The Limits of Underpotential Deposition in the Nanoscale

s07-045

Teresa Licona (Department of Materials, UAM-Azcapotzalco, Mexico, Mexico), Manuel Palomar-Pardavé, Leonardo González-Reyes, Silvia Corona-Avendaño, Mario Romero Romo

Electrochemical oxidation of uric acid on a TiO_2 nanoparticles-modified carbon paste electrode

s07-046

Ricardo Schrebler (Institute of Chemistry, P. Universidad Católica de Valparaíso, Valparaíso, Chile), Luis Ballesteros, Marian Angeles Abellan, Paula Grez, Rodrigo Schrebler, Humberto Gomez, Ricardo Córdova

Comparative study of the photoelectrocatalytic oxidation of organic molecules on α-Fe_2O_3 electrodes modified with Platinum

s07-047

Matias Villalba (INQUIMAE, Facultad de Ciencias Exactas y Naturales, Univ. Buenos Aires, Buenos Aires, Argentina), Lucila Mendezdeleo, Ernesto Calvo

PM-IRRAS Spectroelectrochemical study of redox probes incorporated in LbL self-assembled multilayer films

s07-048

Ildefonso Zamudio (Department of Electrochemistry, Centro de Investigación y Desarrollo Tecnológico en Electroq. Querétaro, Mexico), Celeste Torres, José de Jesús Pérez, Yunny Meas

Industrial Ti Plate Anodizing of Irregular Surfaces for Obtaining TiO_2 Nanotubes in Organic Media

Symposium 11: Molecular Electrochemistry of Novel Organic and Coordination Compounds, Electrosynthesis and Electrocatalysis

Molecular and supramolecular electrode mechanisms

s11-001

Claudio Barrientos (Departamento de Química Farmacológica y Toxicológica, Universidad de Chile, Santiago, Chile), Luis Núñez-Vergara, Patricio Navarrete, Arturo Squella

Electrochemistry and Reactivity towards Superoxide Radical Anion of some 3-Cinnamoylcoumarins in Aprotic Medium

s11-002

David Evrard (Laboratoire de Génie Chimique (UMR UPS/CNRS/INP 5503), Université Paul Sabatier – Toulouse III, Toulouse, France), William Richard, Bertrand Busson, Christophe Humbert, Abderrahmane Tadjeddine, Pierre Gros

Identification of the three-step reduction mechanism of 4-nitrobenzene diazonium by electrochemistry and spectroscopies

s11-003

Liliana González Linares (Area Académica de Medicina, Universidad Autónoma del Estado de Hidalgo, Pachuca de Soto, Mexico), Victor Esteban Reyes Cruz, María Aurora Veloz Rodríguez, José Luis Imbert Palafox

Electrochemical Evaluation of Antimalarial Drugs

s11-004

Dafne Guzmán (Department of Chemistry, UAM-Iztapalapa, Mexico, Mexico), María-Teresa Ramírez-Silva, Annia Galano, Alberto Rojas-Hernández, Silvia Corona-Avendaño, Mario Romero Romo, Manuel Palomar-Pardavé

Electrochemical and Spectrophotometrical Determination of the Thermodynamic Constants of the Inclusion Complex Formed by Tenoxicam and beta-Cyclodextrin

s11-005

Urszula E. Wawrzyniak (Department of Microbioanalytics, Faculty of Chemistry, Warsaw University of Technology, Warsaw, Poland)

Synthetic Oligopeptides For Binding Of Copper(II) Ions And Studies Of Interactions With Amyloid-ß

s11-006

Claudia Yanez (Organica y Fisicoquimica, Universidad de Chile, Santiago, Chile), Mary Carmen Garcia, Daniela Baez, Soledad Bollo

Chemical Immobilization of Amino Cyclodextrin on Carbon Surface

s11-007

Norma Macias-Ruvalcaba (Facultad de Quimica, Department of Physical Chemistry, Universidad Nacional Autonoma de Mexico, México, Mexico), Elizabeth Galvan-Miranda, Martha Aguilar-Martinez, Ernesto Rivera, Gerardo Zaragoza-Galan

Electrochemical and Spectroelectrochemical Characterization of the Evolution of Tetraphenylporphyrin Radical Cation Species

s11-008

Mayra Elba Manzanera Estrada (Department of Electrochemical, CIDETEQ, Pedro Escobedo Queretaro, Mexico), Luis Felipe Hernández Ayala, Guadalupe Osorio-Monreal, Juan Carlos García-Ramos, Lena Ruiz-Azuara

Electrochemical behavior of the complex $[Cu(pdto)(H_2O)]^{2+}$ (pdto=1,8-bis-(2-pyridyl)-3,6-dithiaoctane) in the presence of the superoxide

s11-009

Jorge Pavez (Department of Materials Chemistry, Universidad de Santiago de Chile, Santiago, Chile), Mireya Santander-Nelli, Carlos Silva-Molina, José Zagal, Maritza Páez, Fernando Mendizabal

Assembled Electrodic Systems: An Experimental and Theoretical Approach

s11-010

Piotr Romanczyk (Physical Chemistry Group, Cracow University of Technology, Krakow, Poland), Gleb Andryianau, Grzegorz Rotko, Wojciech Nitek, Stefan Kurek

Electronic Communication across Saturated Bridges in Dimolybdenum Scorpionates: The Effect of Substituents and Local Environment

Organic and inorganic electrosynthesis and electrocatalysis

s11-011

Renata Bilewicz (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Olga Swiech, Elzbieta Megiel

TEMPO Coated Au Nanoparticles: Synthesis, Tethering to Gold Electrodes and Application for Electrocatalytic Oxidations

s11-012

Christian Durante (Department of Chemical Sciences, Università degli Studi di Padova, Padova, Italy), Binbin Huang, Abdirisak Ahmed Isse, Armando Gennaro

Highly Selective Electrochemical Hydrogenation of Acetylene to Ethylene at Ag and Cu Cathodes

s11-013

Rafael Irigoyen (Laboratorio de Electroquímica, UANL, Monterrey, Mexico), Leonor Blanco, Susana López

Electrochemical Characterization of Asymmetric meso-Substituted Porphyrins

s11-014

Mauricio Isaacs (Department of Inorganic Chemistry, Pontificia Universidad Catolica de Chile, Santiago, Chile), Diego Quezada, Jessica Honores, Francesca Fuenzalida, Carlos Diaz, Diego Guzman

Electrocatalytic Reduction of Carbon Dioxide in Ionic Liquids With N-4 macrocyclic Complexes Containing Transitions Metals

Symposium 13: Education in Electrochemistry

s13-001

Maria Alejandra Carreon Alvarez (Department of Ciencias Naturales y Exactas, Universidad de Guadalajara, Ameca, Mexico), Carlos Villa, Alejandro Gómez, Roberto Molina, Alejandro Camarena, Rocio Castañeda, Jorge Avalos

Development of two conductivity apparatus for teaching education: Elementary, middle and high school

s13-002

Cheng-Hui Chen (Department of Biomedical Engineering, National Cheng Kung University, Tainan, Taiwan)

Thermodynamic Studies on Cyclic Voltammogram of the Ferri/Ferro System Using Approximate Entropy Algorithm

Poster Session 3

Symposium 1: Environmental Electroanalysis

Electroanalytical data analysis

S01-001

Marcos Roberto Moreira-Silva Junior (Faculty of Science and Technology, São Paulo State University (UNESP), Presidente Prudente, Brazil), Marcos F. S. Teixeira, Ricardo T. Kushikawa, Larissa S. Silva

Doping Control Analysis of the Hydrochlorothiazide Using a Nickel Oxide Modified Electrode

S01-002

Marcia Elizangela Paulino (Instituto de Quimica de Sao Carlos, Universidade de Sao Paulo, Sao Carlos, Brazil)

Adsorption of Organic Molecules on the Platinum Surface Decorated by Rhodium and Tin

S01-003

Armando Isael Vázquez Aranda (Instituto de Metalurgia, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico), Israel Rodríguez Torres, José Luis Nava Montes de Oca, María Isabel Lázaro Báez, E.R. Larios-Duran

An electrochemical impedance spectroscopy study of the oxidation of water on a BDD anode

Electroanalytical instrumentation and electrodes

S01-004

Eliane Gonçalves de Araújo (Department of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Carlos Alberto de Sousa Carnaúba Júnior, Jéssica Horacina Bezerra Rocha, Carlos Alberto Martinez-Huitle, Nedja Fernandes

Carbon Paste Electrode as Sensor for Identification of Folic Acid in Tablets

S01-005

Ricardo F. Brocenschi (Department of Chemistry, Universidade Federal de S. Carlos, S. Carlos, Brazil), Romeu C. Rocha-Filho, Greg M. Swain

Comparative Electrochemical Response of Estrone at Glassy-Carbon and Nitrogen-Containing Tetrahedral Amorphous Carbon or Boron-Doped Diamond Thin-Film Electrodes

S01-006

Martín Dávila (Department of Chemical Physical, Universidad Autónoma de Puebla, Puebla, Mexico)

Irradiation products of dopamine: Their electrochemical (ED), UV-DAD and ESI-TOF-MS detection in LC

S01-007

Juan Mancilla (Departmento de Química Orgánica y Fisicoquímica, Santiago, Chile), Arturo Squella

Screen-printed electrodes based on Carbon modifiedwith Carbon Nanotubes and Gold Nanoparticles for the determination of arsenic (III)

S01-008

María-Teresa Ramírez-Silva (Department of Chemistry, UAM-Iztapalapa, Mexico, Mexico), Jorge Juárez-Gómez, Francisco Pérez-García, Alberto Rojas-Hernández, Carlos Galán-Vidal, Elena Páez-Hernández

Ion-Selective Electrode Based on a New Ionophore Dithiophosphate of SoliD Internal Contact for the Potentiometric Determination of Hg(II)

S01-009

Elba Socorro Rosas Tate (Department of Enviromental Chemistry, Universidad Autónoma del Estado de México, Toluca, Mexico), Patricia Balderas Hernández, Gabriela Roa Morales, Carlos Barrera Diaz

Carbon paste electrode modified with lemon peel (Citrus limonum) and xanthate lemon peel for detection of Pb(II)

S01-010

Giovanni Valenti (Department of Chemistry, University of Bologna, Bologna, Italy), Valeria Zamolo, Erica Venturelli, Valentina Castagnola, Massimo Marcaccio, Olivier Chaloin, Maria Herrero, Francesco Paolucci, Aurelia Tubaro, Alberto Bianco, Maurizio Prato

Electrochemiluminescent biosensor based on carbon nanotubes for the detection of marine toxin

Electroanalytical methodology

S01-011

Maria Aguirre (Department of Chemistry and Biology, Universidad de Santiago, Santiago, Chile), Francesca Fuenzalida, Daniel Gonzalez, Joselyn Sepulveda, Galo Ramirez, Mauricio Isaacs

Designing new cheap electrodes and looking for what kind of electrochemical methods are better for determining wine aging

S01-012

Danyelle Araújo (Departamento de Química, Universidade Federal do Rio Grande do Norte, Natal, Brazil), Eliane Gonçalves de Araújo, Marina Avelino Santos de Oliveira, Tatiana Munsch-Cabrera, Cícero Aragão, Nedja Fernandes, Carlos Alberto Martinez-Huitle

Caffeine in Tablets: Comparison Quantification by Electroanalytical and Chromatography Methods

S01-013

Elena Díaz de León (Department of Electrochemistry, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico), Luz María Torres Rodríguez, Antonio Montes Rojas

Electrochemical determination of capsaicin using a β-cyclodextrin modified carbon paste electrode

S01-014

Elena Díaz de León-Zavala (Facultad de Ciencias Químicas, UASLP, San Luis Potosí, Mexico)

Cyclic voltammetric study of formation inclusion complexes between cyclodextrins and capsaicin in aqueous solution and attached on a carbon paste electrode

S01-015

Akira Kotani (School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan), Ayumi Kanase, Fumiyo Kusu

Determination of pK_b of Weak Base Compounds Using the Voltammetric Oxidation of Trolox

S01-016

Milivoj Lovric (Department of Marine and Environmental Research, Rudjer Boskovic Institute, Zagreb, Croatia)

Cyclic voltammetry of the second order CE mechanism at the thin mercury film covered stationary planar electrode

S01-017

Galo Ramirez (Departmento de Quimica Inorganica, Facultad de Quimica, Pontificia Universidad Catolica de Chile, Santiago, Chile), Camila Canales, Monica Antilen

Electro – oxidation of Nitrite, Using Glassy Carbon Electrode Activated by Electrochemical Oxidation. Assay as Electrochemical Sensor

S01-018

Xiangying Sun (Department of Applied Chemistry, Huaqiao University, Xiamen, China), Bin Liu, Feng Zhou, Huiting Lian

Potential Identification For Chirality Amino Acid With Graphene Doped Molecularly Imprinted Sensor

Environmental electroanalysis

S01-019

Judith Callejas (Área Académica de Química, Universidad Autónoma del Estado deHidalgo, Pachuca de Soto, Mexico), Victor Reyes, Francisco Prieto, Yolanda Marmolejo

Electrochemical Phosphates Removal using Aluminium Electrode

S01-020

Anaid Cano Quiroz (Centro Conjunto de Investigación en Química Sustentable, Universidad Autonoma del Estado de México, Toluca, Mexico)

Caffeine Degradation Through Electrochemical Oxidation Using A BDD Electrode System

S01-021

Vinicius Celante (Department of Chemistry, Instituto Federal do Espírito Santo - IFES - Campus Aracruz, Serra, Brazil), Evelyn Torezone, Jhoucely Runge, Marcos Freitas, Maria Lelis

Electrofloculation treatment of oil´s production water by Co and Cu recycled of spent Li-ion batteries

S01-022

Nedja Fernandes (Department of Chemistry, UFRN, Natal, Brazil), Eliane Gonçalves de Araújo, Gustavo Oliveira, Elisama Santos, Marco Panizza, Carlos Alberto Martinez-Huitle

Applicability of Electroanalysis for Monitoring Oxalic Acid (OA) Concentration during its Electrochemical Oxidation

S01-023

Lenys Fernández (Department of Chemistry, Universidad Simón Bolívar, Caracas, Venezuela), Isis Ledezma, Carlos Borrás, Luis Martínez, Hermes Carrero

Horseradish peroxidase modified electrode based on a film of Co-Al layered double hydroxide modified with sodium dodecylbenzenesulfonate for determination of 2-chlorophenol

S01-024

Orlando García (Department of Electrochemistry, CIDETEQ, Pedro Escobedo, Mexico), Luis A. Godínez Mora-Tovar, Erika Bustos, Luis A. Ortiz, Francisco J. Rodríguez

Voltammetric determination of Iron using a glassy carbon and gold electrodes

S01-025

Saurav K. Guin (Department of Atomic Energy, Fuel Chemistry Division, Bhabha Atomic Research Centre, Mumbai, India), Jisha S. Pillai, Arvind S. Ambolikar, Suresh Kumar Aggarwal

Template-free electrosynthesis of monodispersed gold nanoparticles on glassy carbon electrode for the determination of Pb(II) at ultratrace levels

S01-026

José Luis Jurado Baizaval (Staff Dirección General, Centro de Inv. y Desarrollo Tecnológico en Electroquímica, Querétaro, Mexico), Francisco Estrada Arreola, Luis Antonio Ortiz Frade, René Antaño

Electrochemical analysis of *Enterococcus faecalis* in water by impedance measurements

S01-027

Teresa Licona (Department of Materials, UAM-Azcapotzalco, Mexico, Mexico), Arturo Alvarez, Manuel Palomar-Pardavé, Mario Romero Romo, María-Teresa Ramírez-Silva

Electrochemical quantification of nitrites ions using a polypyrrole membrane doped with no_2-

S01-028

Mayeli Mondragón-Barrueta (Electrochemistry and Electrosynthesis Laboratory, Centro de Investigación en Química Sustentable UAEMéx-UNAM, Toluca, Mexico), Patricio J. Espinoza-Montero

Reduction of $O_2(g)$ to H_2O_2 on boron-doped diamond electrode at different electrolyte concentrations in acidic media

S01-029

Roselyn Peña (Department of Chemistry, University of São Paulo, São Paulo, Brazil), Mauro Berotti

Removal of Pb^{2+} with functionalized magnetic nanoparticles: Evaluation by anodic stripping voltammetry

S01-030

Camila A. Proença (Department of Physics, Chemistry and Biology, São Paulo State University (UNESP), Presidente Prudente, Brazil), Marcos R. M. Silva Junior, Diego N. David-Parra, Homero M. Gomes, Marcos F. S. Teixeira

Analysis of Voltammetric Data for the Evaluation of Atmospheric Particulate Lead Concentration and Its Relationship with Relative Humidity

S01-031

Renata Selesovska (Institute of Environmental and Chemical Engineering, University of Pardubice, Pardubice, Czech Republic), Lenka Bandžuchová, Hana Hrabovszká, Jaromíra Chýlková

Voltammetric Determination of Herbicide Metamitron Using Mercury and Silver Solid Amalgam Electrode

S01-032

Maria Maesia Soares Gomes Eiband (Department of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Elisama Vieira dos Santos, Kelvin Gama Guimarães, Kamelia Cristina Araújo Trindade, Djalma Ribeiro da Silva, Carlos Alberto Martinez-Huitle

Application of electrochemical technology for removing Pb : Viability of electroanalysis for quantifying Pb duringits elimination by Electrocoagulation

S01-033

Eduardo Toral Sánchez (Environmental Sciences Division, Instituto Potosino de Investigación Científica y Tecnológica, San Luis Potosí, Mexico), José René Rangel Méndez, Luis Felipe Cházaro Ruiz

Iron modified carbon paste electrodes for voltammetric detection of As(V)

S01-034

Nereyda Nohemi Treviño Medina (Department of Electrochemistry, Facultad de Ciencias Químicas, UANL., San Nicolás de los Garza, Mexico), Leonor Blanco

Application of Square-Wave Voltammetry to Determine the Antioxidant Activity of Larrea Tridentata Phenolic Extracts

Symposium 8: Electrochemical Engineering for Green Processing

Electrochemical engineering

s08-001

Francisco Almazán (Departamento de Química y Bioquímica, Tecnológico de Estudios Superiores de Ecatepec, Ecatepec de Morelos, Mexico), Zaira Rios, Martin Cruz-Diaz, Francisco Caballero, Eligio Rivero

Copper recovery and cyanide destruction from the electroplating industry alkaline effluent

s08-002

Locksley Castañeda (CIDETEQ, Queretaro, Mexico), Julieta Torres Gonzalez, Jorge Morales Hernandez, Federico Castañeda Zaldivar, José Luis Nava Montes de Oca, René Antaño

Study of scaling-down an electrodialysis reactor for regenerating of sulfuric acid

s08-003

Alejandro N. Colli (PRELINE, Facultad de Ingeniería Química, Universidad Nacional del Litoral, Santa Fe, Argentina), José M. Bisang

Local Mass Transfer Study at Parallel Plate Electrodes under Laminar Flow Conditions

s08-004

Alejandro N. Colli (PRELINE, Facultad de Ingeniería Química, Universidad Nacional del Litoral, Santa Fe, Argentina), José M. Bisang

Mass Transfer Performance of a Parallel Plate Reactor with Convergent Flow

s08-005

Martin Cruz-Diaz (Department of Chemical and Biochemical Engineering, Tecnologico de Estudios Superiores de Ecatepec, Ecatepec, Mexico), Miguel González-Morales, Francisco Almazán, Eligio Rivero, Ignacio González

Modeling the RTD of a modified electrochemical reactor FM01-LC using CFD

s08-006

Rubi Enciso (Instituto de Metalurgia, Universidad Autonoma de San Luis Potosi, San Luis Potosi, Mexico), Armando Isael Vázquez Aranda, Jose Angel Delgadillo Gomez, Israel Rodríguez Torres

Simulation of mass transfer and degradation of 2-thiocyanomethylthiobenzothiazole (TCMTB) using a BDD DiaCell ® reactor

s08-007

Juan Carlos Flores Segura (Área Académica de Ciencias de la Tierra y Materiales, Universidad Autónoma del Estado de Hidalgo, Pachuca de Soto, Mexico), Victor Esteban Reyes Cruz, Oumarou Savadogo, María Aurora Veloz Rodríguez

Effect of the Agitation Speed in the Deposit of Iron from Kaolin Clay Solution

s08-008

Juan Hernandez-Tapia (Department of Chemistry, Universidad Autonoma Metropolitana, Mexico, Mexico), Jorge Vazquez-Arenas, Ignacio González

A factorial design 32 to analyse the significance of inter-electrode gap, electrolyte conductivity and cathode rotation in an electrochemical reactor with RCE

s08-009

Ichiro Koiwa (Department of Applied Material and Life Science, Kanto Gakuin University, Yokohama-shi, Japan), Nobuaki Watanabe, Shoma Koike, Norio Hirashita, Makoto Urano, Kunimitsu Maejima

Analyses of Plated Films by Thermal Desorption Spectrometry (TDS)@Especially for Cyanide for Films Plated from Cyanide Free Bath

s08-010

Andy Alán Melo López (Área Académica de Ciencias de la Tierra y Materiales, Universidad Autónoma del Estado de Hidalgo, Pachuca, Mexico), Juan Carlos Flores Segura, Victor Esteban Reyes Cruz, María Aurora Veloz Rodríguez

Clays Electrochemical Purification: Preliminary Study

s08-011

Eligio Rivero (Engineering and Technology, Universidad Nacional Autónoma de México-FES Cuautitlán, Cuautitlán Izcalli, Mexico), Martin Cruz-Diaz, Francisco Almazán, Francisco V. Caballero-Domínguez, Ignacio González

Experimental and Modeling Study of the Effect of Geometric Changes on the Performance of RCE Reactors for Cu Recovery

s08-012

Jorge Vazquez-Arenas (Department of Chemistry, Universidad Autonoma Metropolitana, Mexico, Mexico), Ignacio González

The effects of the anodic reaction and the ohmic drop in the Cu(II) reduction on a rotating cylinder electrode

s08-013

Elisama Vieira dos Santos (Intituto de Química, Universidade Federal do Rio Grande do Norte, Natal, Brazil), Danyelle Medeiros de Araújo, Djalma Ribeiro da Silva, Nedja Suely Fernandes, Carlos Alberto Martinez-Huitle

Electro-Remediation of Soil as Alternative Treatment for Removing Hydrocarbons

s08-014

Elisama Vieira dos Santos (Intituto de Química, Universidade Federal do Rio Grande do Norte, Natal, Brazil), Maria Jucilene de Macedo Melo, Maiara Barbosa Ferreira, Djalma Ribeiro da Silva, Carlos Alberto Martinez-Huitle

Applicability of Integrated Process for Removing Bromocresol Green (BG) Dye: Anodic Oxidation and Adsorption by Ion Exchange Resin

Electrochemical processes and development

s08-015

José M. Bisang (PRELINE, Facultad de Ingeniería Química, Universidad Nacional del Litoral, Santa Fe, Argentina), Omar González Pérez

Hydrogen peroxide production with a three-dimensional rotating cylinder electrode

s08-016

Locksley Castañeda (CIDETEQ, Queretaro, Mexico), Julieta Torres Gonzalez, Jorge Morales Hernandez, Federico Castañeda Zaldivar, René Antaño

Generation of a spent pickling bath by electrooxidation as a model solution for the regeneration of sulfuric acid by electrodialysis

s08-017

Miku Gotou (Department of Applied Material and Life Science, Kanto Gakuin University, Yokohama, Japan), Nobuaki Watanabe, Yuki Kuga, Naoya Tasugi, Katsuhito Sano, Ichiro Koiwa

Aluminum Film Formation from Non-aqueous Solution by Electrochemical Technique

s08-018

Nobuaki Watanabe (Institute of Science and Technology, Kanto Gakuin University, Yokohama, Japan), Akihiro Yamamoto, Miku Gotou, Ichiro Koiwa

Electrodeposition of Zn/Al-oxide Composite Films from Non-Suspended Solution

Environmental electrochemistry

s08-019

Omotayo Arotiba (Department of Applied Chemistry, University of Johannesburg, Johannesburg, South Africa), Bulelwa Ntsendwana, Bhekie Mamba, Srinivasan Sampath

Degradation of Trichloroethylene by Electrochemical Oxidation using Exfoliated Graphite-Diamond Composite Electrode

s08-020

Hortensia C. Arredondo Valdez (Department of Ciencias Naturales y Exactas, Universidad de Guanajuato, Guanajuato, Mexico), Guadalupe Garcia, Silvia Gutierrez, Carlos Ponce de Leon, Maria Maldonado S.

Comparative Study of the Reaction Mechanisms for Paracetamol Degradation by Advanced Oxidation Processes (AOPs)

s08-021

Ulker Bakir Ogütveren (Department of Environmental Engineering, Anadolu University, Eskisehir, Turkey), Seçil Gürel, Yusuf Yavuz

Electrocoagulation of Organized Industrial District Raw Wastewater Using Iron Electrodes

s08-022

Jennifer Bañuelos (Electroquímica Ambiental, CIDETEQ, Querétaro, Mexico), Francisco J. Rodríguez, Luis A. Godínez Mora-Tovar

TOC Removal from Real Wastewater Using a Novel Electro-Fenton Approach by Activated Carbon

s08-023

Jéssica Horacina Bezerra Rocha (Department of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Cíntia Raquel da Silva Pessoa, Djalma Ribeiro da Silva, Nedja Fernandes, Carlos Alberto Martinez-Huitle

Electrochemical Treatment for Remediation of Contaminated Water by Oil Products using Ti/Pt and BDD anodes

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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 3500 individual members, from 72 countries, and is organized in 40 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, Journal of Solid State Electrochemistry, Electrocatalysis and Electroanalysis.
- 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 2013 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

H. Kim, Seoul, Korea (2013-2014)
Representation of ISE. Chairperson of Executive Committee, Council and General Assembly

President Elect

Ch. Amatore, Paris, France (2013-2014)
Chairperson of Committee of Division Officers. Coordination of scientific program of future Annual Meetings, supervision of Division Officers' activities

Immediate Past President

M. Orazem, Gainesville, FL (2013-2014)
Chairperson of Executive Committee in the absence of the President

Vice Presidents

J. Gooding, Sidney, Australia (2013-2015)
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.
Annual and Topical 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. Downard, Past Chair: A. Bond, Chair Elect: F. Bedioui, Vice-Chairs: P. Baker and D. Mandler

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: W. Shin, Past Chair: A. Kuhn, Chair Elect: R. Bilewicz, Vice-Chairs: E. Ferapontova and D. Arrigan

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: D. Jones, Past Chair: E. Frackowiak, Chair Elect: S. Passerini, Vice-Chairs: R. Kostecki and H. Uchida

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: M. Ryan, Past Chair: P. Schmuki, Chair Elect: S. Brankovic, Vice-Chairs: Mikhail Vorotyntsev, Shinji Fujimoto

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: F. Lapicque, Past Chair: T. Homma, Chair Elect: J. Peralta-Hernandez, Vice-Chairs: Karel Bouzek and G. Zangari

Division 6 – MOLECULAR ELECTROCHEMISTRY

Structural and mechanistic aspects of electrode processes of inorganic, metallorganic and organic substances; synthetic applications.
Chair: M. Goulart, Past Chair: J. Ludvik, Chair Elect: F. Paolucci, Vice-Chairs: J. Wadhawan and C. Frontana

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: M. Eikerling, Past Chair: E. Savinova, Chair Elect: A. Russell, Vice-Chairs: J. Lee and J. Rossmeisl

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: T. Jacob, Past Chair: H. Abruña, Chair-Elect: P. Unwin

Regional Representatives

Argentina:	A.E. Bolzan	2012-2014	1st term
Australia	C. Hogan	2013-2015	1st term
Austria:	W. Kautek	2013-2015	2nd term
Belgium:	C. Buess-Herman	2013-2015	2nd term
Brazil:	E.A. Ticianelli	2012-2014	1st term
Bulgaria	Z. Stoynov	2012-2014	1st term
Canada:	G. Jerkiewicz	2013-2015	1st term
Chile:	R. Salazar	2013-2015	1st term
China:	S.G. Sun	2013-2015	1st term
Croatia:	S. Komorsky-Lovric	2012-2014	2nd term
Czech Republic	M. Hromadova	2013-2015	2nd 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	2013-2015	2nd term
Hungary:	L. Peter	2011-2013	1st term
Iran:	M.A.A. Ensafi	2013-2015	1st term
Ireland:	E. Marsili	2010-2012	1st term
Israel:	A. Vaskevich	2011-2013	1st term
Italy:	S. Cattarin	2013-2015	1st term
Japan:	T. Matsue	2011-2013	1st term
Korea:	I.-H. Yeo	2013-2015	2nd term
Lithuania:	R. Ramanauskas	2011-2013	2nd term
Mexico:	C. Frontana	2012-2014	1st term
Netherlands:	M. van Brussel	2013-2015	2nd term
Norway:	S. Sunde	2013-2015	2nd term
Poland:	M. Skompska	2013-2015	1st term
Portugal:	J.M. Palma Correia	2012-2014	1st term
Romania:	L. Muresan	2012-2014	2nd term
Russia:	M. Vorotyntsev	2013-2015	1st term
Serbia:	A. Dekanski	2011-2013	1st term
South Africa:	K. Ozoemena	2013-2015	2nd term
Spain:	C. Müller	2011-2013	2nd term
Sweden:	F. Björefors	2013-2015	2nd term
Switzerland:	E. Bakker	2013-2015	1st term
Ukraine:	O. Linyucheva	2013-2015	2nd term
United Kingdom:	T. Albrecht	2011-2013	1st term
USA:	V.F. Lvovich	2012-2014	1st term

Corporate and Corporate Sustaining Members of ISE

Ametek - Advanced Measurement Technology
Bio-Logic SAS
Crown Battery Manufacturing
DropSens, S.L.
Gamry Instruments
Metrohm Autolab BV
Permascand AB
Sensolytics GmbH
Scribner Associates, Inc.
Tanaka Kikinzoku Kogyo K.K.
Van London – pHoenix Co.
Zahner-elektrik GmbH & Co KG

CIDETEC
CNR - Istituto per l'Energetica e le Interfasi, Padova, Italy
Paul Scherrer Institut, Switzerland

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
•Society for Electroanalytical Chemistry (The)

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
R. Adzic
A. Aldaz
R. Alkire
C. Amatore
D. Aurbach
P. Bartlett
R. J. Behm
J. O'M. Bockris
A. Bond
E. Cairns
C. Comninellis
R. Compton
S. Cosnier
P. Delahay
W.R. Fawcett
J. Feliu
C. Gabrielli
E. Gileadi
H. Girault
L. Gorton
R. Guidelli
P. Hapiot
J. Heinze
R. Hillman
G. Inzelt
T. Kakiuchi
H. Kim
A. Kornyshev
O. Lev
J. Lipkowski
D. Macdonald
P. Marcus
R.A. Marcus
N. Markovic
J. McBreen
R. Nichols
T. Osaka
Z. Samec
D. Schiffrin
W. Schmickler
W. Schuhmann
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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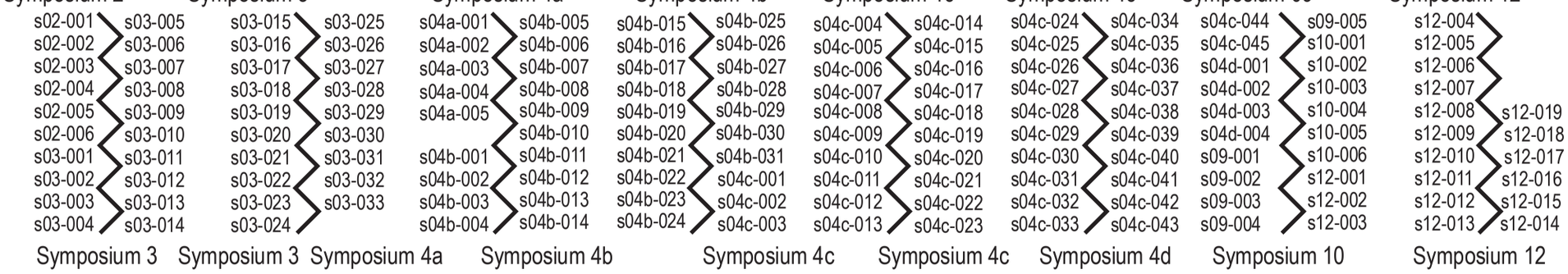
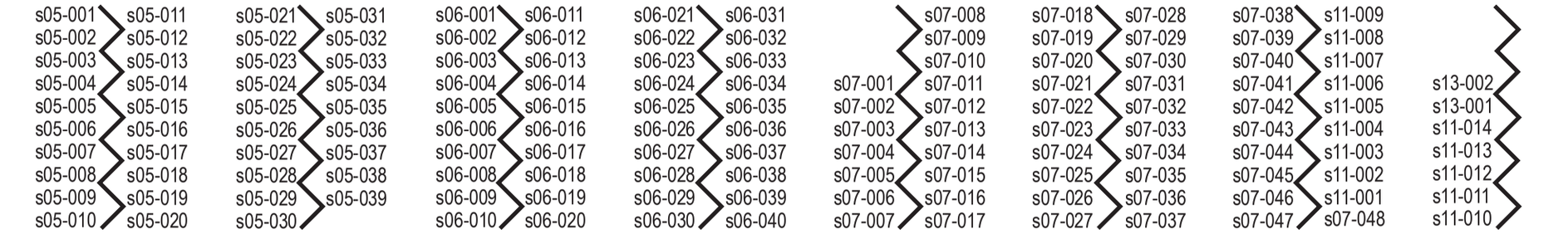
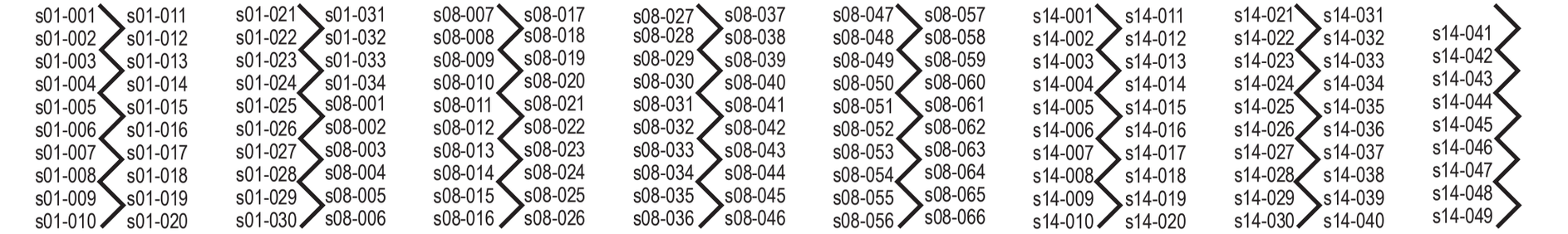
POSTER SESSION 1, Monday 9 September 2013, 11:30 -13:00



POSTER SESSION 2, Tuesday 10 September 2013, 10:40 -12:30



POSTER SESSION 3, Wednesday 11 September 2013, 11:00 -12:30



The new Autolab/PGSTAT204

The Autolab/PGSTAT204 is the newest addition to the Autolab compact series instruments.

Designed with both a small footprint and modularity, the PGSTAT204 combines the compactness of the PGSTAT101 with the best features of its predecessor, the µAutolab type III, resulting in a conveniently priced instrument with superior, research grade specifications.

The Autolab/PGSTAT204 is a 20 V/400 mA potentiostat/galvanostat which can be complemented with one additional module at any time, to extend the functionality of the base instrument.

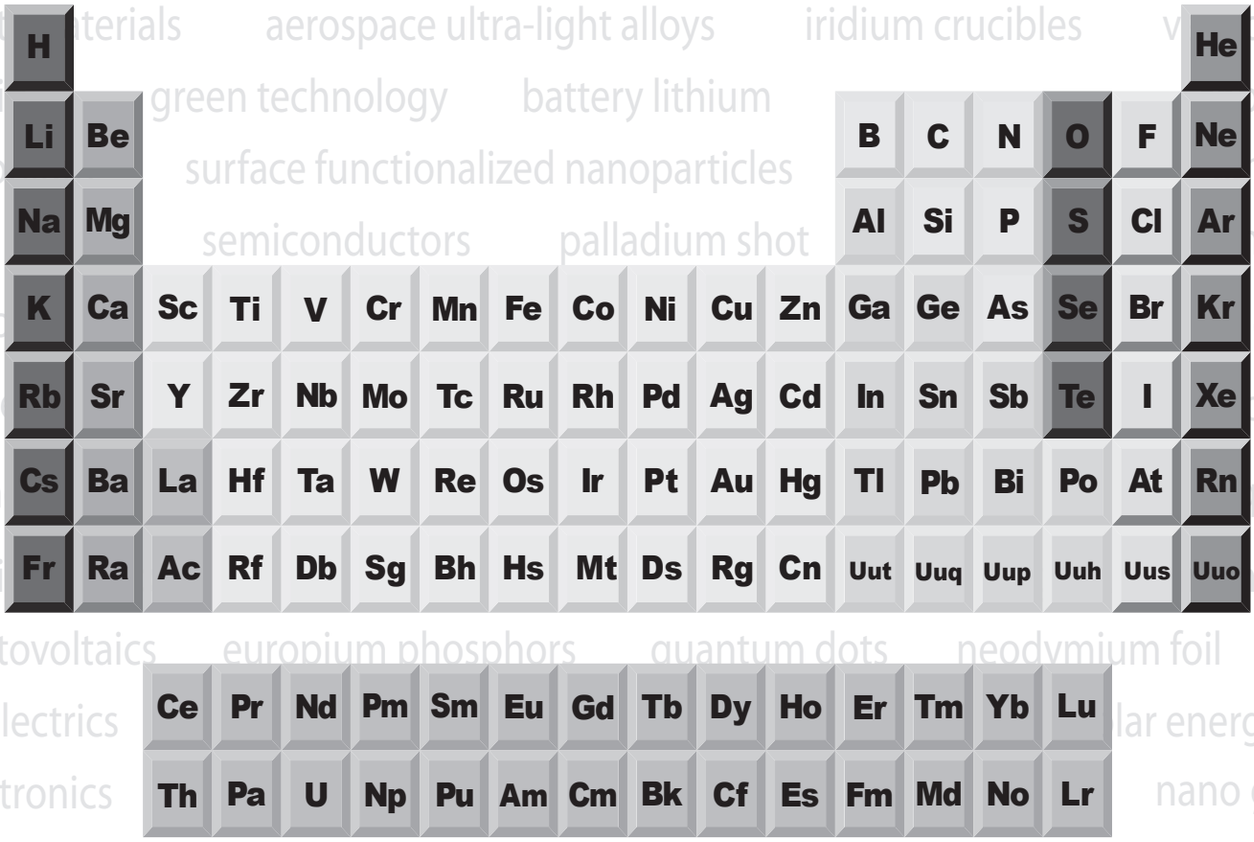
The PGSTAT204 is an affordable instrument which can be located anywhere in the lab. It is fitted with analog and digital inputs/outputs to interface with external equipments. The Autolab/PGSTAT204 also includes a built-in analog integrator.

Optional modules

- FRA32M - Electrochemical impedance spectroscopy
- pX1000 - pH and temperature measurements
- MUX - Multiplexing module for complete cells or individual working electrodes
- BA - Dual mode bipotentiostat
- EQCM - Electrochemical quartz crystal microbalance

3 year
instrument warranty

Metrohm
Autolab B.V.



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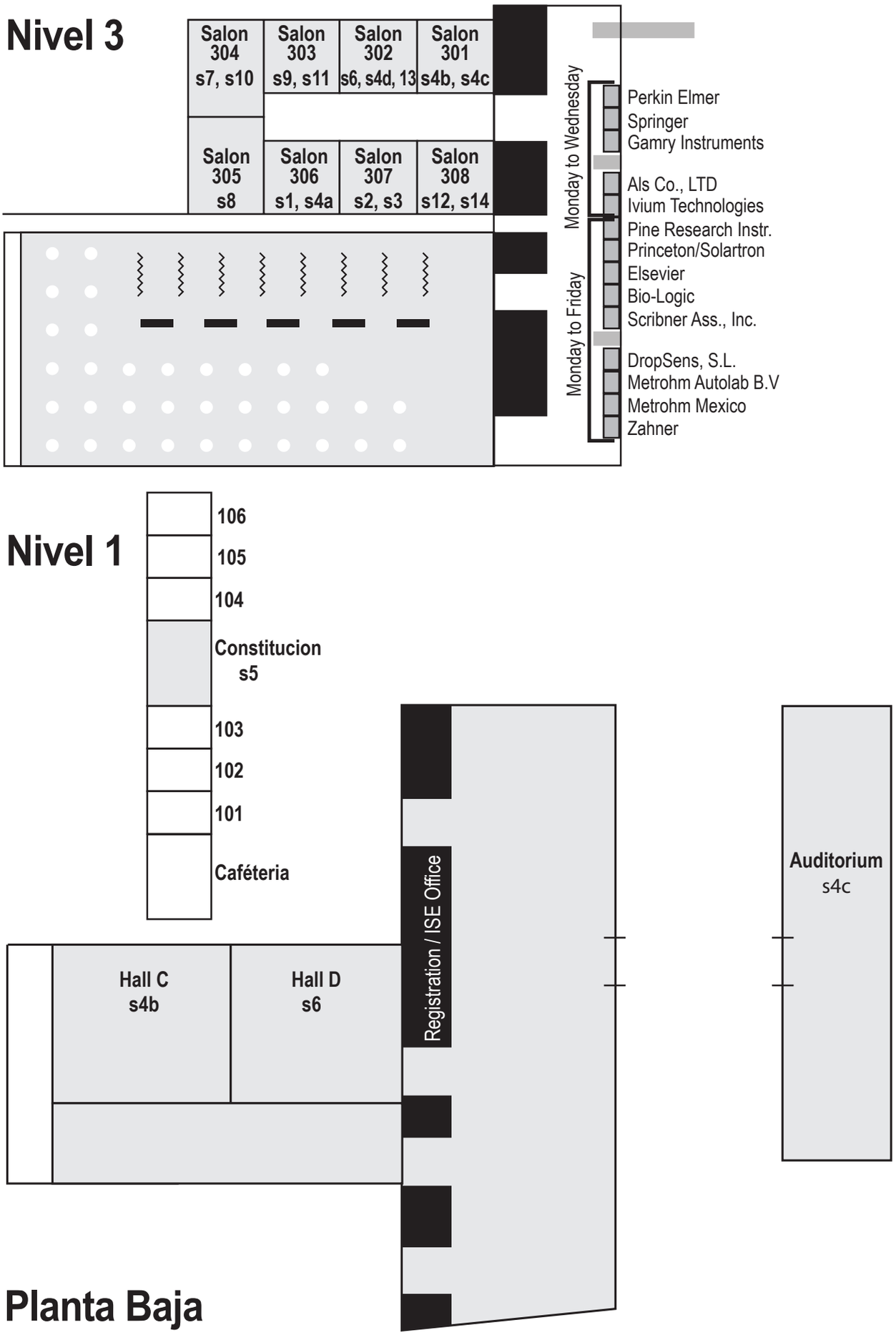
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Salon 307 s2, s3
Salon 308 s12, s14
Monday to Wednesday
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Springer
Gamry Instruments
Als Co., LTD
Ivium Technologies
Monday to Friday
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Hall D s6
Auditorium s4c
Planta Baja