



71st Annual Meeting

of the
International Society of Electrochemistry

Belgrade, Wednesday 31 August to Friday 4 September 2020

Symposium 17
Oral presentation program

Wednesday 2 September 2020

s17 Electroactive materials: polymers, inorganic solids, nanocomposites and hybrid materials

Chairman : *Carlos Sanchez*

10:00 to 10:10

Opening

10:10 to 10:30 Keynote

Jadranka Travas-Sejdic (School of Chemical Sciences, The University of Auckland, Auckland, New Zealand)

[Conducting Polymer Biointerfaces](#)

10:30 to 10:40 Invited

Gyozo G. Lang (Institute of Chemistry, Department of Physical Chemistry, Eotvos Lorand University, Budapest, Hungary), Krisztina J. Szekeres, Mária Ujvári, Soma Vesztergom

[Electrochemical Impedance Spectroscopy for the Characterization of Conductive Polymer Films - The Non-stationary Case](#)

10:40 to 10:50

Csaba Visy (Department of Physical Chemistry & Material Science, University of Szeged, Szeged, Hungary)

[How Can Details of Processes of Conducting Polymers Be Uncovered by Means of In-situ Combined Electrochemical Techniques](#)

10:50 to 11:00

Alexander Nekrasov (Russian Academy of Sciences, Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow, Russia), Olga Yakobson, Oxana Gribkova

[Raman spectroelectrochemistry of conducting polymer films on reflective electrode: role of double excitation of the solution layer](#)

11:00 to 11:10

Mikhail Vorotyntsev (Chemistry, Lomonosov Moscow State University, Moscow, Russia), Dmitry Konev, Olga Istakova, Olga Goncharova, Charles Devillers

[Combined Spectroelectrochemical and EQCM Study of Magnesium Porphine Electropolymerization Process](#)

11:10 to 11:20

Laurent Ruhlmann (Chemistry, Institut of Chemistry, University of Strasbourg, Strasbourg, France)

[Hybrid \(iso\)porphyrin – polyoxometalate copolymer for photo\(electro\)chemical applications: from flat to mesoporous ITO electrodes](#)

11:20 to 11:40

Coffee Break

11:40 to 11:50

Martin Sjödin (Material Science and Engineering, Uppsala University, Uppsala, Sweden), Rikard Emanuelsson, Christian Strietzel, Huan Wang, Mia Sterby, Maria Strømme

[Designing Quinone-based Conducting Redox Polymers specifically for Aqueous Proton Batteries and for Lithium Ion Battery Cathodes](#)

11:50 to 12:00

Adriana Ribeiro (Chemistry and Biotechnology Institute, Federal University of Alagoas, Maceió, Brazil), Jorge Lima Neto, Luis Silva, Joel da Silva, Ana Júlia da Silva, Dimas Lima

[Multielectrochromic Conjugated Polymers Based on 2,5-Di\(thienyl\)pyrrole Derivatives](#)

12:00 to 12:10

Sara Grecchi (Chemistry, Università degli Studi di Milano, Milano, Italy), Serena Arnaboldi, Francesco Orsini, Tiziana Benincori, Patrizia R. Mussini

[New Families of Inherently Chiral Monomers with Different Atropisomeric Cores for Applications as Oligomeric Films in Chiral Electrochemistry](#)

12:10 to 12:20

Wahid Ullah (LCPME, Université de Lorraine , Villers-lès-Nancy, France), Neus Vila, Gregoire Herzog, Alain Walcarius

[Preparation of Covalently Attached and Robust PANI Nanorod Arrays Using an Oriented Mesoporous Silica Film as Hard Template](#)

12:20 to 12:30

Federica Mariani (Department of Industrial Chemistry, University of Bologna, Bologna, Italy), Isacco Gualandi, Domenica Tonelli, Francesco Decataldo, Luca Possanzini, Beatrice Fraboni, Erika Scavetta

[Design of an electrochemically gated organic semiconductor for pH sensing](#)

12:30 to 12:40

Luís Almeida (Centro de Química Estrutural, Faculdade de Ciências da Universidade de Lisboa, Lisbon, Portugal), Rui Correia, Barbara Palys, Jorge Correia, Ana Viana

[Electropolymerization of Catechol and Bio-inspired Analogues - Performance of Thin Films as Biosensing Interfaces](#)

LunchBreak

14:20 to 14:30

Opening

14:30 to 14:40 Invited

Mario Ferreira (Department of Materials Engineering, Campus Santiago, Aveiro, Portugal), João Tedim

[Multifunction Nanostructured Coatings for Corrosion Protection. Contribution to a Sustainable Technology](#)

14:40 to 14:50

Aleksandr Ivanishchev (Institute of Chemistry, Saratov State University, Saratov, Russia), Arseni Ushakov, Irina Ivanishcheva, Alexey Korzhakov, Kirill Rybakov, Semen Makhov, Ambesh Dixit

[Structural and Electrochemical Characterization of Lithium and Transition Metals Polyanionic Compounds](#)

14:50 to 15:00

Jürgen Schoiber (Chemistry and Physics of Materials, University of Salzburg, Salzburg, Austria), Daniela Reiff, Michael Karl, Simone Pokrant

[H2V3O8 as model system for ion insertion](#)

15:00 to 15:10

Ivana Zrinski (Institute For Chemical Technology Of Inorganic Materials, Altenberger Straße 69, 4040, Austria), Jan Philipp Kollender, Cezarina Cela Mardare, Achim Walter Hassel, Andrei Ionut Mardare

[Influence of electrolyte selection on anodic memristors behavior](#)

15:10 to 15:20

Ponart Aroonratsameruang (Materials Science and Engineering, Vidyasirimedhi Institute of Science and Technology (VISTEC), Rayong, Thailand), Pichaya Pattanasattayavong, Gabriel Loget

[Surface Modification of Metal-Insulator-Semiconductor \(MIS\) Photoanodes with Prussian Blue Analogs](#)

15:20 to 15:30

Verónica de Zea Bermudez (Department of Chemistry, University of Trás-os-Montes e Alto Douro, Vila Real, Portugal)

[Smart Electrochromic/Thermotropic Windows of Energy-Efficient Buildings based on Different Electrolytes](#)

15:30 to 15:50

Coffee Break

15:50 to 16:00 Invited

Daniel Mandler (Institute of Chemistry, The Hebrew University, Jerusalem, Israel), Ori Geuli
[Electrochemical Deposition of Composite and Hybrid Materials](#)

16:00 to 16:10

Pawel J Kulesza (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Iwona A Rutkowska
[Enhancement of Electrooxidation of Simple Organic Fuels at Noble Metal Nanoparticles Supported onto Mixed-Metal-Oxides](#)

16:10 to 16:20

Erhan Karaca (Chemistry, Hacettepe University, Ankara, Turkey), Mine Sen Teker, Nuran Ozcicek, Kadir Pekmez, Ugur Tamer
[An enzyme-free H₂O₂ sensor based on poly\(2_aminophenylbenzimidazole\)/gold nanoparticles coated pencil graphite electrode](#)

16:20 to 16:30

Pauline E. Desroches (IFM, Deakin University, BURWOOD, Australia), Anita F. Quigley, Robert M. I. Kapsa, Simon E. Moulton, Saimon M. Silva, George W. Greene
[Lubricin, an Antifouling Coating for Electroactive Surfaces](#)

16:30 to 16:40

Patricia Santiago (Chemistry Institute, Unicamp, Campinas, Brazil), Carlos Lima, José Bott-Neto, Pablo Fernandez, Camilo Angelucci, Janaina Souza-Garcia
[Perovskites as electrocatalyst for glycerol oxidation: reaction pathway](#)

16:40 to 16:50

Sheng-Mu You (Chemistry, ICMMO, Paris Saclay University, Orsay, France), Waleed El Rouby, Ruey-An Doong, Pierre Millet
[Bimetallic Organic Framework Deposited on Anodized TiO₂ Nanotube Arrays with Enhanced Photoelectrochemical Activity for Water Oxidation](#)

Thursday 3 September 2020

s17 Electroactive materials: polymers, inorganic solids, nanocomposites and hybrid materials

Chairman : *Carlos Sanchez-Sanchez*

14:00 to 14:10

Opening

14:10 to 14:30 Keynote

Robert Hillman (School of Chemistry, University of Leicester, Leicester, United Kingdom), Hani Ismail, Jamil Juma, Hasan Alesary, Andrew Abbott, Karl Ryder

[Deposition, Wetting and Ion-exchange of Polyaniline and Polyaniline Composite Films in Deep Eutectic Solvents](#)

14:30 to 14:40

Mirko Magni (Dipartimento di Scienze e Politiche Ambientali, Università degli Studi di Milano, Milan, Italy), Pelin Yilmaz, Sandra Martinez, Rosa Maria Gonzalez Gil, Monica Della Pirriera, Michele Manca

[Spectrally Selective PANI/ITO Nanocomposite Electrodes for Dual Band Dynamic Windows](#)

14:40 to 14:50

Gisella Liliana Lucero Lucas (Electrochemistry and Electroplating group, Technische Universität Ilmenau, Ilmenau, Germany), Andreas Bund

[Electrochemical nitrite sensor based on PEDOT and hollow AuPt nanoparticles](#)

14:50 to 15:00

Wenhai Wang (Institut de Ciència de Materials de Barcelona, Autonomous University of Barcelona, Barcelona, Spain)

[Porous Carbons Derived from Alcohol-Treated Bacterial Cellulose for Li-O₂ Batteries](#)

15:00 to 15:10

Aldo Zarbin (Department of Chemistry, Federal University of Parana, Curitiba, Brazil), Lais Lopes, Jessica Fonsaca, Ariane Schmidt, Eduardo Neiva, Maria Karolina Ramos, Caroline Ferreira, Samantha Husmann

[Liquid/liquid interfaces: a new platform to prepare and process thin films of complexes and multi-component electroactive materials](#)

15:10 to 15:20

Evgeniy Makagon (Materials and Interfaces, Weizmann Institute of Science, Rehovot, Israel), Evgeniy Makagon, Ellen Wachtel, Lothar Houben, Sidney R. Cohen, Yuanyuan Li, Junying Li, Anatoly Frenkel, Igor Lubomirsky

[Electro-chemo-mechanical coupling: a novel approach to micro actuation](#)

15:20 to 15:40

Coffee Break

15:40 to 15:50

Omolola Esther Fayemi (Chemistry, Department Of Chemistry, North-West University, Mafikeng Cam, Mafikeng, South Africa)

[Electrochemical and spectroscopic properties of Green Synthesized Gold Nanoparticles Doped in Polyacrylonitrile Nanofibers](#)

15:50 to 16:00

Theophilus Kobina Sarpey (Department of Physics, Technical University of Munich, Garching/Munich, Germany), Johannes Fichtner, Sebastian Watzele, Batyr Garleyev, Jan M. Macak, Aliaksandr Bandarenka

[Nanostructured Pt_xM/C \(M = Cu, Co, Ni, Ir, Y\) Alloy Electrocatalysts Synthesized via a Novel Top-Down Route Towards the Enhancement of the ORR Activity](#)

16:00 to 16:10

Elisa Musella (Industrial Chemistry, University of Bologna, Bologna, Italy), Isacco Gualandi, Erika Scavetta, Marco Giorgetti, Vittorio Morandi, Reinhard Denecke, Domenica Tonelli

[Electrochemical Synthesis of Ni/Al Layered Double Hydroxide and Reduced Graphene Oxide Composites for eco-friendly Energy Storage](#)

16:10 to 16:20

Rodrigo Muñoz (Institute of Chemistry, Federal University of Uberlandia, Uberlandia, Brazil), Raquel Rocha, Jéssica Stefano, Eduardo Richter, Priscilla Zambiasi, Juliano Bonacin

[Electrochemical synthesis of Prussian blue from iron impurities in 3D-printed graphene electrodes: Amperometric detection of H₂O₂](#)

16:20 to 16:30

Laifa Shen (Jiangsu Key Laboratory of Electrochemical Energy Storage Tec, Nanjing University of Aeronautics and Astronautics, Nanjing, China), Xiaogang Zhang

[Reaction Confinement Enables High-Capacity and Stable Anodes for Alkali-Ion Batteries](#)