



71st Annual Meeting

of the
International Society of Electrochemistry

Belgrade, Wednesday 31 August to Friday 4 September 2020

Symposium 4
Oral presentation program

Wednesday 2 September 2020

s04 New trends in bioelectrochemistry

Chairman : Fred Lisdat

15:30 to 16:00 Keynote

Evgeny Katz (Department of Chemistry & Biomolecular Science, Clarkson University, Potsdam, USA)

[From Bioelectrochemistry to Bioelectronics, Biocomputing and “Smart” Materials](#)

16:00 to 16:15

Antonio De Lacey (Instituto de Catálisis, CSIC, Madrid, Spain), Gabriel García-Molina, Paolo Natale, Laura Valenzuela, Julia Alvarez-Malmagro, Cristina Gutiérrez-Sánchez, Ana Iglesias-Juez, Iván López-Montero, Marisela Vélez, Marcos Pita

[Reconstitution of Escherichia coli ATP-Synthase on Gold Electrodes for Potentiometric Detection of ATP](#)

16:15 to 16:30

Paolo Bollella (Chemistry and Biomolecular Science, Clarkson University, Potsdam, USA), Artem Melman, Zhong Guo, Selvakumar Edwardraja, Wayne Johnson, Kirill Alexandrov, Evgeny Katz

[PQQ-Glucose Dehydrogenase-Calmodulin Chimera Enzyme: Different Triggered Activation for Multipurpose Biosensors](#)

16:30 to 16:45

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

[Bioelectrocatalysis for Electrosynthesis](#)

16:45 to 17:10

Discussion

17:10 to 17:25 Invited

Sven Ingebrandt (Institute of Materials in Electrical Engineering 1, RWTH Aachen University, Aachen, Germany), Mohit Suranglikar, Parham Mohajerani, Xuan Thang Vu, Federico Polo, Vivek Pachauri

[Lab-on-a-chip device for parallel optical and electrical detection of antibiotics](#)

17:25 to 17:40

Wassim El Housseini (France, Laboratory of Physical Chemistry and Microbiology for the En, Nancy, France), Mathieu Etienne, François Lopicque, Elisabeth Lojou, Neus Villa, Alain Walcarius

[Optimized bioreactor for coupling efficiently H₂ oxidation to NADH regeneration](#)

17:40 to 17:55

Adalgisa De Andrade (Chemistry- USP, Faculdade de Filosofia Ciências e Letras de Ribeirão Preto, Ribeirão Preto, Brazil), Jesimiel G.R. Antonio, Sidney Aquino Neto, Jefferson H. Franco, Maria de Lourdes T. M. Polizeli, Shelley Minteer, Adalgisa R. De Andrade

[Enhanced of Ethylene Glycol Electrooxidation by Hybrid Catalytic Systems](#)

17:55 to 18:10

Imogen Heaton (Chemistry, Loughborough University, Loughborough, United Kingdom), Mark Platt DNAzyme Based Sensor for the Detection of Metal Ions in Solutions Using Resistive Pulse Sensing

18:10 to 18:25

Eleni Stavrinidou (Department of Science and Technology, Linköping University, Norrköping, Sweden)

[Monitoring plant physiology with organic electrochemical transistors](#)

18:25 to 18:50 Discussion

Thursday 3 September 2020

s04 New trends in bioelectrochemistry

Chairman : Fred Lisdat

15:30 to 16:00 Keynote

Jochen Blumberger (Physics and Astronomy, University College London, London, United Kingdom)

[Light- versus voltage-driven electron transfer across multi-heme proteins](#)

16:00 to 16:15

Artavazd Badalyan (Department of Chemistry and Biochemistry, Utah State University, Logan, USA), Zhi-Yong Yang, Lance C. Seefeldt

[A Voltammetric Study of Nitrogenase Catalysis Using Electron Transfer Mediators](#)

16:15 to 16:30

Iryna Makarchuk (The Joint Research Unit Chemistry of Complex Matter UMR 7140, University of Strasbourg, Strasbourg, France), Alexander Theßeling, Hamid Nasiri, Andreas Speicher, Thorsten Friedrich, Petra Hellwig, Frédéric Melin

[Development of Bioelectrochemical Sensor Based on Cytochrome bd Oxidase](#)

16:30 to 16:45

Inmaculada Marquez (Physical Chemistry, University of Seville, Seville, Spain), Jose Luis Olloqui-Sariego, Miguel Molero, Rafael Andreu, Emilio Roldan, Juan Jose Calvente

[Revising the Proton Coupled Electron Transfer of Immobilized Hemin](#)

16:45 to 17:00

Xiaomei Yan (Department of Chemistry, Technical University of Denmark, Copenhagen, Denmark), Su Ma, Jing Tang, David Ackland Tanner, Jens Ulstrup, Xinxin Xiao, Jingdong Zhang

[Understanding the Effects of Self-Assembled Monolayers and Nanoporous Structure on Direct Electron Transfer of Fructose Dehydrogenase](#)

17:00 to 17:25

Discussion

17:25 to 17:40

Poster Flash presentations

17:40 to 17:55 Invited

Mei Shen (Chemistry, University of Illinois at Urbana-Champaign, Urbana, USA)

[Nanoelectrochemistry for Studying Neurotransmission in Real-Time](#)

17:55 to 18:10

Kaiyu Fu (Electrical Engineering and Radiology, Stanford University, Stanford, USA), Ji-Won Seo, Amani Hariri, Hyongsok Soh

[From Nanoelectrochemistry to Real-Time Biosensors: Analysis of Neurotransmitters Using Nanoporous Electrode](#)

18:10 to 18:25

Alexander Oleinick (PASTEUR, Departement de Chimie, Ecole Normale Superieure, PSL Univ., Sorbonne Univ., CNRS, Paris, France), Lin Ren, Alexander Oleinick, Irina Svir, Christian Amatore, Andrew Ewing

[Vesicular Neurotransmitter Release is Altered by Zinc Cations as Evidenced by Amperometry and Kinetic Modelling](#)

18:25 to 18:40

Darren Buesen (Center for Electrochemical Sciences, Ruhr-Universitaet Bochum, Bochum, Germany), Huaiguang Li, Nicolas Plumeré

[The Electron as a Probe to Measure the Thickness Distributions of Electroactive Films](#)

18:40 to 19:00

Discussion

Friday 4 September 2020

s04 New trends in bioelectrochemistry

Chairman : Fred Lisdat

15:30 to 16:00 Keynote

Erwin Reisner (Chemistry, University of Cambridge, Cambridge, United Kingdom)

[Interfacing Biocatalysts with Porous Metal Oxide Electrodes for Semi-artificial Photosynthesis](#)

16:00 to 16:15

Felipe Conzuelo (Analytical Chemistry - Center for Electrochemical Sciences, Ruhr University Bochum, Bochum, Germany), Felipe Conzuelo, Panpan Wang, Fangyuan Zhao, Anna Frank, Anna Lielpetere, Sonia Zacarias, Marc M. Nowaczyk, Ines A. C. Pereira, Adrian Ruff, Matthias Roegner, Wolfgang Schuhmann

[Photosystem I Monolayers with Controlled Orientation for the Fabrication of Energy Conversion Devices](#)

16:15 to 16:30

Sascha Morlock (Institute of Life Sciences and Biomedical Technologies, Technical University of Applied Sciences Wildau, Wildau, Germany), Senthil Subramanian, Athina Zouni, Fred Lisdat

[Photobioelectrode Based on 3D Reduced Graphene Oxide and Photosystem I](#)

16:30 to 16:45

Omer Yehezkeili (Faculty of Biotechnology Engineering, Technion, Israel institute of Technology, Haifa, Israel)

[Biotic/Abiotic Photo-Bioelectrochemical Cells for the Generation of Electrical Power](#)

16:45 to 17:00

Benoît Piro (Chemistry - Lab. ITODYS, Université de Paris - , PARIS, France), Jérémy Le Gall, Roberta Brayner, Giorgio Mattana, Vincent Noël

[Water-Gated Organic Field Effect Transistor for Monitoring of Photosynthetic Organisms](#)

17:00 to 17:25

Discussion

17:25 to 17:40 Invited

Stephan Sylvest Keller (DTU Nanolab, Technical University of Denmark, Kongens Lyngby, Denmark), Claudia Caviglia, Suhith Hemanth, Yasmin Mohamed Hassan, Jesper Yue Pan, Babak Rezaei

[Smart scaffolds for electrochemical monitoring of cell cultures](#)

17:40 to 17:55

Kaixiang Huang (Department of Chemistry, Indiana University, Bloomington, USA), Lushan Zhou, Kristen Alanis, Jianghui Hou, Lane Baker

[Imaging Effects of Hyperosmolality on Individual Tricellular Junctions](#)

17:55 to 18:10

Noriko Taira (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Hiroki Ida, Yuji Nashimoto, Kosuke Ino, Akichika Kumatani, Hitoshi Shiku

[Nanoscale visualization of cell surface under Epithelial-Mesenchymal Transition by Scanning Ion Conductance Microscopy](#)

18:10 to 18:25

Jacek Lipkowski (Chemistry, University of Guelph, Guelph, Canada), Zhangfei Su, Slawomir Sek, Adrian Schwan

[How Ionophore-Valinomycin Enters and Transports K⁺ Across a Model Bilayer Lipid Membrane](#)

18:25 to 18:50

Discussion