



71st Annual Meeting

of the
International Society of Electrochemistry

Belgrade, Wednesday 31 August to Friday 4 September 2020

Symposium 6
Oral presentation program

Wednesday 2 September 2020

s06 Advances in microbial electrochemistry for energy conversion, biotransformation, bioremediation and electroanalysis

Chairman : Elena Ferapontova

14:00 to 14:40 Keynote

Yujie Feng (School of Environment, Harbin Institute of Technology, Harbin, China), Peng Zhang, Da Li

[Mechanism of boosted electron transfer in microbial electrochemical systems with carbon-based materials](#)

14:40 to 15:00 Invited

Alain Bergel (Laboratoire de Génie Chimique, CNRS, Toulouse, France)

[Microbial Electrochemical Technologies: False Leads, Open Perspectives and Ethics](#)

15:00 to 15:10

Coffee Break

15:10 to 15:30 Invited

Benjamin Korth (Department of Environmental Microbiology, Helmholtz-Centre for Environmental Research – UFZ, Leipzig, Germany)

[On the thermodynamics of electroactive microorganisms](#)

15:30 to 15:50 Invited

Annemiek Ter Heijne (Environmental Technology, Wageningen University & Research, Wageningen, Netherlands), Riëks De Rink, Margo Elzinga, Dandan Liu, Jan Klok, Cees Buisman

[Bioelectrochemistry to improve biological gas desulfurization](#)

15:50 to 16:10 Invited

Enrico Marsili (Chemical and Materials Engineering, Nazarbayev University, Nur-Sultan, Kazakhstan), Kayode Olaifa, Nada D. Savic, Jasmina Nikodinovic-Runic, Biljana D. Glisic

[Antibiofilm activity of dinuclear silver\(I\) complexes with pyridine-based macrocyclic type of ligand against clinically relevant species](#)

16:10 to 16:20

Coffee Break

16:20 to 17:00 Keynote

Pierangela Cristiani (Sustainable Development and Energy Sources, Ricerca sul Sistema Energetico, Milano, Italy), Giuliana D'ippolito, Angelo Fontana, Gaetano Squadrito

[Electrostimulation of hyperthermophile Thermotoga neapolitana cultures in a Power-to-gas perspective](#)

17:00 to 17:20 Invited

Deepak Pant (Separation & Conversion Technology, Boeretang, MOL, Belgium)

[Technological advances in CO₂ Electrobiorefinery: Linking Bioelectrochemical CO₂ reduction with Renewable Energy](#)

17:20 to 17:30

Coffee Break

17:30 to 17:35

Silvia Bolognesi (Department of Civil Engineering and Architecture, University of Pavia, Pavia, Italy), Daniele Cecconet, Arianna Callegari, Andrea G. Capodaglio

[Coupling microalgae and microbial fuel cells: process optimization for simultaneous wastewater treatment and energy recovery](#)

17:37 to 17:42

Timothé Philippon (Institut des Sciences Chimiques de Rennes, Institut des Sciences Chimiques de Rennes, Rennes, France), Théodore Bouchez, Jianghao Tian

[Development of denitrifying bio-cathodes and study of their bacterial communities](#)

17:44 to 17:49

Joanna Roginska (LCPME, University of Lorraine/CNRS, Nancy, France), Marc Hebrant, Michel Perdicakis, Christelle Despas, Julien Tournebize, Frédéric Jorand, Mathieu Etienne

[Constructed Wetland-Microbial Electrochemical Snorkel system for efficient denitrification](#)

17:51 to 17:56

Morgane Hoareau (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France), Benjamin Erable, Alain Bergel

[Oxygen Supply Management to Intensify Domestic Wastewater Treatment by a Microbial Electrochemical Snorkel \(MES\)](#)

17:56 to 18:10

Coffee Break

18:10 to 18:15

Valerio C.A. Ficca (Department of Chemical Science and Technologies, University of Rome Tor Vergata, Rome, Italy), Carlo Santoro, Plamen Atanasov, Barbara Mecheri

[Fingerprint of Fe-N-C Catalysts Poisoning for ORR Application in Microbial Fuel Cells](#)

18:17 to 18:22

Mounika Kodali (Chemical and Biomolecular Engineering, University of California- Irvine, Irvine, USA)

[Enhancement of microbial fuel cell performance by introducing a nano-composite cathode catalyst](#)

18:24 to 18:29

Mehrdad Mashkour (Department of Chemistry, University of Bologna, Bologna, Italy), Federico Poli, Mostafa Rahimnejad, Mahdi Mashkour, Carlo Santoro, Francesca Soavi

[Capacitive Performance of Polyaniline Modified Conductive Bacterial Cellulose as Anode in Supercapacitive Microbial Fuel Cell](#)

Thursday 3 September 2020

s06 Advances in microbial electrochemistry for energy conversion, biotransformation, bioremediation and electroanalysis

Chairman : Elena Ferapontova

14:00 to 14:40 Keynote

Julea Butt (School of Chemistry, University of East Anglia, Norwich, United Kingdom)

[Biomolecular Wires of Electric Bacteria: Themes and Variations](#)

14:40 to 15:00 Invited

Caroline Ajo-Franklin (BioSciences, Rice University, Houston, USA), Sara Tejedor-Sanz, Moshe Baruch, Lin Su

[Powering Catalysis and Growth in Microorganisms Using Electrochemistry and Synthetic Biology](#)

15:00 to 15:10

Coffee Break

15:10 to 15:30 Invited

Haluk Beyenal (Chemical Engineering and Bioengineering, Wegner Hall, Room 105, PULLMAN, USA), Abdelrhman Mohamed

[Scalable biofilm electrodes](#)

15:50 to 16:10 Invited

Uwe Schröder (Institute of Environmental and Sustainable Chemistry, Technische Universität Braunschweig, Braunschweig, Germany)

[Biofilm electrodes - can we push the limits?](#)

16:10 to 16:20

Coffee Break

16:20 to 17:00 Keynote

Gemma Reguera (Microbiology and Molecular Genetics, Michigan State University, East Lansing, USA)

[Electric Microbes, Metals, and Nanowires](#)

17:00 to 17:20 Invited

Daniel Bond (Plant and Microbial Biology, University of Minnesota, Saint Paul, USA)

[Designing Cells To Detect Redox Potential Gradients Within Conductive Biofilms And Rectify Electron Flow](#)

17:20 to 17:30

Coffee Break

17:30 to 17:35

Iwona Gajda (Bristol BioEnergy Centre, University of the West of England, Bristol, United Kingdom), Iwona Gajda, Tapuwa Sahondo, Thubelihle M. Blose, Xavier Alexis Walter, Rebecca C. Sindall, Chris Buckley, John Greenman, Ioannis Ieropoulos

[Microbial Fuel Cell Stack for Treatment and Off-grid Power from Human Urine: Multi-parameter Analysis](#)

17:37 to 17:42

Ivo Bardarov (Chemistry, South West University "Neofit Rilski", Blagoevgrad, Bulgaria), Mario Mitov, Ivo Bardarov, Elitsa Chorbadzhiyska, Yolina Hubenova

[First Evidence for Applicability of Microbial Electrochemical Snorkel for Metal Recovery](#)

17:44 to 17:49

Daniele Cecconet (Department of Chemistry, University of Pavia, Pavia, Italy), Silvia Bolognesi, Luca Piacentini, Arianna Callegari, Andrea Capodaglio

[Greywater Treatment with Microbial Fuel Cells: Organic Matter Removal and Energy Production](#)

17:51 to 17:56

Matteo Tucci (Water Research Institute (IRSA), National Research Council (CNR), Monterotondo (RM), Italy), Carolina Cruz Viggì, Paolo Tomei, Bruna Maturro, Simona Crognale, Ilaria Pietrini, Simona Rossetti, Federico Aulenta

[All-in-one: removal of oxidizable \(hydrocarbons\) and reducible \(sulfate\) contaminants from contaminated groundwater in a single bioelectrochemical reactor](#)

17:56 to 18:08

Coffee Break

18:08 to 18:13

Matteo Grattieri (Chemistry and Materials Science & Engineering, University of Utah, Salt Lake City, USA), Jeffrey Copeland, Shelley D. Minter

[Engineering Redox Mediating Systems to Study Photoinhibition Effects of Exogenous Mediators in Purple Bacteria](#)

18:15 to 18:20

Elitsa Chorbadzhiyska (Chemistry, South West University "Neofit Rilski", Blagoevgrad, Bulgaria), Elitsa Chorbadzhiyska, Ivo Bardarov, Yolina Hubenova, Elitsa Petkucheva, Evelina Slavcheva, Mario Mitov

[Novel Non-precious Metal Nanocomposites as Cathodic Electrocatalysts for Microbial Electrolysis Cells](#)

18:22 to 18:27

Ruggero Rossi (Civil and Environmental Engineering, The Pennsylvania State University, University Park, USA), Ruggero Rossi, Bruce Logan

[Increasing Microbial Fuel Cell Power Densities Requires a Better Understanding of Factors that Impact Electrode Performance](#)

18:29 to 18:34

Pavlina Theodosiou (School of Engineering, Newcastle University, Newcastle upon Tyne, United Kingdom), Elizabeth Heidrich

[Husbanding Biological Heat to Optimise Energy Conversion in Bioelectrochemical Systems \(BES\)](#)