



71st Annual Meeting

of the
International Society of Electrochemistry

Belgrade, Wednesday 31 August to Friday 4 September 2020

Symposium 12
Oral presentation program

Wednesday 2 September 2020

Symposium 12

Electrochemical engineering for environmentally friendly processing and environmental protection

Chairman : *Gerardine Botte*

14:00 to 14:30

Jelena Radjenovic (Technology and Evaluation Area, Catalan Institute for Water Research, Girona, Spain), Natalia Sergienko, Nick Duinslaeger, Giannis Florjan-Norra, Luis Baptista-Pires
[Electrochemical systems for the treatment of contaminated water: limitations, challenges and prospective](#)

14:30 to 14:50

Mohammad Alkhadra (Chemical Engineering, Massachusetts Institute of Technology, Cambridge, USA), Huanhuan Tian, Prof. Martin Bazant
[Continuous separation of ionic contaminants and particles from water by shock electrodialysis](#)

14:50 to 15:10

Yinke Chen (Grand Technion Energy Program, Technion – Israel Institute of Technology, Haifa, Israel), Eric N. Guyes, Charles E. Diesendruck, Matthew E. Suss
[Capacitive Desalination with Sulfonated Nanoporous Carbon Electrodes](#)

15:10 to 15:30

Budi Putra (Chemistry, University of Bath, Bath, United Kingdom)
[Application of Ionic Rectification for Water Purification: Desalination with a Nafion Cationic Diode](#)

15:30 to 15:50

Youri Gendel (Faculty of Civil and Environmental Engineering, Technion-Israel Institute of Technology, Haifa, Israel), Gidon Amikam, Naama Manor-Korin, Paz Nativ
[Micro-scale capacitive-faradaic fuel cells for ions separation from water](#)

15:50 to 16:10

S12 - Round table for discussion

Thursday 3 September 2020

S12 Electrochemical engineering for environmentally friendly processing and environmental protection

Chairman : *Gerardine Botte*

14:00 to 14:30

Elisabetta Petrucci (Chemical Materials Environment Engineering, Sapienza University of Rome, Rome, Italy), Irene Bavasso

[Electrochemical Decomposition of Ozone for the Treatment of Textile Wastewaters: a real case-study.](#)

14:30 to 14:50

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

[Highly Energy-efficient Electrochemical Advanced Oxidation Processes Based on Natural Air Diffusion Electrode](#)

14:50 to 15:10

Faidzul Hakim Adnan (Laboratoire Réactions et Génies des Procédés (LRGP), Université de Lorraine - CNRS, Nancy, France), Emmanuel Mousset, Marie-Noëlle Pons

[Influence of Micrometric Inter-electrode Distances and Water Hardness on Mineral Scaling at the Electrode Surface during Electrochemical Advanced Oxidation Process](#)

15:10 to 15:30

Giulia Moggia (Applied Engineering, University of Antwerp, Antwerp, Belgium), Jonathan Schalck, Nick Daems, Tom Breugelmans

[Two steps synthesis of D-glucaric acid by electrocatalytic oxidation of D-glucose on a gold electrode: influence of operational parameters](#)

15:30 to 15:50

Alejandro Nicolás Colli (PRELINE - Facultad de Ingeniería Química, UNIVERSIDAD NACIONAL DEL LITORAL, Santa fe, Argentina), Juan Pablo Fornés, Omar González Pérez, José M. Bisang

[Modified Hydrocyclone as Electrochemical Reactor: Modelling, Characterization and Applications](#)

15:50 to 16:00

S12 - Round table for discussion

Friday 4 September 2020 - PM

s12 Electrochemical engineering for environmentally friendly processing and environmental protection

Chairman : Gerardine Botte

14:00 to 14:30

Ana Sofia Fajardo (School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, USA), Paul Westerhoff, Carlos M. Sanchez-Sanchez, Sergi Garcia-Segura
[Sustainable electrocatalytic water treatment: Considering the use of earth-abundant materials for nitrate remediation](#)

14:30 to 14:50

Wei Jin (Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China)
[Sustainable Electrochemical Metal Extraction from Waste Streams: From Removal to Recovery](#)

14:50 to 15:10

Jong Seok Kim (Chemical Engineering, Jeonbuk National University, Jeonju, Korea), Ik Tae Im, Tea Hyun Kim
[Recycled silicon slicing slurries by carbon coating for lithium ion batteries](#)

15:10 to 15:30

Maasoom Jafari (Department of Chemical Engineering, Texas Tech University, Lubbock, USA), Maasoom Jafari, Gerardine G. Botte
[Sewage Sludge Treatment by a Novel Electrochemical Technique](#)

15:30 to 15:50

Carlos A Martínez-Huitle (Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil), Mateus C. Medeiros, Elisama V. dos Santos, Djalma R. da Silva, Suely S. L. Castro
[Environmental-electrosynthetic approach to produce selectively acetic acid from cashew-nut shell liquid waste by using non-active electrode](#)

15:50 to 16:00

S12 - Round table for discussion