



71st Annual Meeting

of the

International Society of Electrochemistry

Belgrade, Wednesday 31 August to Friday 4 September 2020

Symposium 16
Oral presentation program

Wednesday 2 September 2020

s16 Two-dimensional materials: An electrochemical perspective

Chairman : Robert Hillman; Shen Ye

09:00 to 09:20 Keynote

Robert Dryfe (Chemistry, University of Manchester, Manchester, United Kingdom)

[D or not 2D: Graphene and related materials in electrochemistry](#)

09:20 to 09:40 Invited

Vito Di Noto (Department of Industrial Engineering, University of Padova, Padova, Italy), Enrico Negro, Angeloclaudio Nale, Keti Vezzù, Gioele Pagot

[Hierarchical “Core-Shell” Low-Loading Pt Oxygen Reduction Reaction Electrocatalysts Based on a Graphene “Core” and a Carbon Nitride “Shell”](#)

09:40 to 10:00 Invited

Kei Murakoshi (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan)

[Exotic Plasmonic Excitation of Electrons beyond The Normal Limit of Electrochemical Potential for Novel Photochemical Reactions](#)

10:00 to 10:20 Invited

Igor Pasti (Department of Electrochemistry and Chemical Kinetics, University of Belgrade - Faculty of Physical Chemistry, Belgrade, Serbia), Ana Dobrota, Aleksandar Jovanovic, Sanjin Gutic, Slavko Mentus

[How Theory Can Help Us with Engineering Graphene-Based Materials for Electrochemical Applications?](#)

10:20 to 10:40

Nakkiran Arulmozhi (Department of Chemistry, Leiden University, Leiden, Netherlands), Marc Koper

[Three-Way Interactions of Two-Dimensional Crystals](#)

10:40 to 11:00

Live discussion (20 min)

11:00 to 12:00

Flash posters

Wednesday 2 September 2020

s16 Two-dimensional materials: An electrochemical perspective

Chairman : Robert Hillman; Csaba Janaky; Shen Ye

12:00 to 12:20 Invited

Kohei Uosaki (Fellow, National Institute for Materials Science, Tsukuba, Japan)

[Boron Nitride Nanosheet as Novel Electrocatalysts for Oxygen Reduction Reaction and Hydrogen Evolution Reaction - Combination with Inert Substrates and Metal Nanoparticles -](#)

12:20 to 12:40

Matej Velický (Department of Physics and Astronomy, University of Manchester, Manchester, United Kingdom), Kostya S. Novoselov, Héctor D. Abruña, Robert Dryfe

[Marcus-Hush Theory for Ultramicroelectrodes Revealed by Electron Tunnelling through Hexagonal Boron Nitride](#)

12:40 to 13:00 Invited

Kevin Sivula (ISIC, EPFL, Lausanne, Switzerland)

[Semiconducting Transition Metal Dichalcogenide 2D Nanoflakes for Photoelectrochemical Applications](#)

13:00 to 13:20

Peter Toth (Department of Physical Chemistry and Materials Science, University of Szeged, Szeged, Hungary), Gabor Szabo, Csaba Janaky

[Structure-Dependency on the Photoelectrochemical Performance of Two-dimensional Transition Metal Dichalcogenides](#)

13:20 to 13:40

Bertold Rasche (Institute of Inorganic Chemistry, University Cologne, Cologne, Germany), Simon J Clarke, Richard G Compton

[Phase diagrams under scrutiny – In-situ electrochemical X-raydiffraction unravels layered \$\beta\$ -Fe_{1+x}Se as superconductor for all x](#)

13:40 to 14:00 Live discussion (20 min)

14:00 to 15:00 Flash posters

15:00 to 15:20 Keynote

Sabine Szunerits (IEMN, University of Lille, Villeneuve d'Ascq, France)

[Reduced Graphene Oxide: Electrochemical Sensing and Therapy](#)

15:20 to 15:40

Jingshu Hui (Department of Chemistry, University of Illinois at Urbana-Champaign, Urbana, USA), A. Nijamudheen, Dipobrato Sarbapalli, Chang Xia, Zihan Qu, Jose Mendoza-Cortes

[Nernstian Li-ion Intercalation into Few-Layer Graphene and its Use for the Determination of K-ion Co-Intercalation Processes](#)

15:40 to 16:00

Andrei Ionut Mardare (Institute fo Chemical Technology of Inorganic Materials, Johannes Kepler University Linz, Linz, Austria), Saeedeh Ravandi, Jan Philipp Kollender, Cezarina Cela Mardare, Achim Walter Hassel

[Electrochemical void pinning and liquid metal effect on electromigration resistance in 2D aluminium and copper alloys](#)

16:00 to 16:20

Martin Konhefr (Department of Biochemistry, Masaryk University, Brno, Czech Republic), Karel Lacina, Petr Skladal, Budi R. Putra, Frank Marken

[Sensing Possibilities of Diferrocenylborinic Acid Immobilized in 2D-Titanate Nanosheet Host](#)

16:20 to 16:40 Invited

Francesca Mirabella (Institute of Applied Physics, TU Wien, Vienna, Austria)

[A "Simple" Model System to Understand the OER in Alkaline Media: the Ni-doped Fe₃O₄\(001\) Surface](#)