

CONFERENCE PROGRAMME

Sunday September 20

13.00 – 18.30 Registration in the entrance hall of the Krystal Hotel

18.30 – 20.00 Welcome Drink

Monday September 21

8.45 – 9.00 RSE-SEE10 Conference Opening, Welcome Address

PLENARY TALK

(Chairman Magdaléna Hromadová)

9.00 – 9.40 Electrochemically Controlled Single-Protein Electronics

Ismael Díez-Pérez

ORAL TALK

(Chairman Magdaléna Hromadová)

9.40 – 10.00 From Molecular to Protein Junctions: Computational Approaches to Charge Transport

Zdenek Futera

10.00 – 10.20 Length-Dependent Spin Polarization in Single α -Helical Peptide Junctions

Wenzhu Kuang

10.20 – 10.50 COFFEE BREAK

KEYNOTE TALK

(Chairman Evelina Slavcheva)

10.50 – 11.20 Calcium/Oxygen Batteries: Challenges and Perspectives

Zoran Mandić

ORAL TALK

(Chairman Evelina Slavcheva)

11.20 – 11.40 Phosphoric Acid Modified Silica-Based Composite Additive of Lead Dioxide Electrodes for Automotive Battery Applications

Albena Aleksandrova

11.40 – 12.00 Cathode-Free Li-Sulphur Batteries: Catalysts for Polysulphide Conversion

Ladislav Kavan

12.00 – 12.45 LUNCH A

12.45 – 13.30 LUNCH B

KEYNOTE TALK

(Chairman Zoran Mandić)

13.30 – 14.00 Low Temperature Electrolyser Research: Taking the Step beyond State of the Art

Merit Bodner

ORAL TALK

(Chairman Zoran Mandić)

14.00 – 14.20 Construction of Well-Curated Battery Material Database and Cycling Stability Prediction by Time-Series Machine Learning

Lyuben Borislovov

14.20 – 14.40 Interface-Engineered Transition-Metal Oxide Cathodes for High-Performance Aqueous Zinc-Ion Batteries

Monaam Benali

14.40 – 15.00 A Controlled Monitoring of Ni Coarsening and Depletion through Electrochemical Testing Methods

Aslam Hossain

15.00 – 15.30 COFFEE BREAK

KEYNOTE TALK (Chairman Merit Bodner)	
15.30 – 16.00	Designing Robust Transition Metal Catalysts for Alkaline Water Electrolysis under Industrially Relevant Conditions <i>Jelena D. Gojgić</i>
ORAL TALK (Chairman Merit Bodner)	
16.00 – 16.20	Electrochemical Performance of Supercapacitors Based on Modified Montmorillonite Electrodes <i>Borislava Mladenova</i>
16.20 – 16.40	Electrodeposition and Characterization of Amorphous Ni-Mo Coatings <i>Veselina Chakarova</i>
16.40 – 17.00	Exploration of Malva Sylvestris L., an Albanian Medicinal Plant, as a Promising Green Corrosion Inhibitor for Mild Steel MS 235 in Aggressive Acidic Media: A Machine Learning-Assisted Predictive Study <i>Alketa Lame</i>
17.00 – 17.20	Influence of Mo and Ta Additions and Heat Treatment Process on the Corrosion Properties of AlCoCrFeNi High-Entropy Alloy <i>Hüseyin Zengin</i>
POSTER SESSION	
17.30 – 19.00	Poster Session I (poster P1 to P19)

19.00 – 20.00 Concert

Tuesday September 22

PLENARY TALK (Chairman Romana Sokolová)	
9.00 – 9.40	Integrating Electrochemistry and Optical Imaging to Probe Liposomes: Emerging Paradigms in Fluorescence and Electrochemiluminescence Studies <i>Olivier Buriez</i>
ORAL TALK (Chairman Romana Sokolová)	
9.40 – 10.00	Enhanced Electrochemical Performance of Boron-Doped Diamond Electrodes via e-Beam-Evaporated Platinum Nanoparticles <i>Oleksandr Matvieiev</i>
10.00 – 10.20	Development of a Voltammetric Method for Dicamba Determination at Boron-doped Diamond Electrodes and Investigation of its Electrooxidation <i>Lenka Janíková</i>

10.20 – 10.50 COFFEE BREAK

KEYNOTE TALK (Chairman Francesco Paolucci)	
10.50 – 11.20	Advanced Aptasensors: Towards Precision in Cancer Marker Detection <i>Miroslav Gál</i>

ORAL TALK
(Chairman Francesco Paolucci)

- | | |
|---------------|---|
| 11.20 – 11.40 | Ferrocene Modified MIPs for (Redox Probe)-Free Electrochemical Sensing
<i>Maciej Cieplak</i> |
| 11.40 – 12.00 | Molecularly Imprinted Polymer-Based Electrochemical Sensor for Sensitive Bisphenol A Detection
<i>Sabrina State</i> |

12.00 – 12.45 LUNCH A

12.45 – 13.30 LUNCH B

KEYNOTE TALK
(Chairman Miroslav Gál)

- | | |
|---------------|---|
| 13.30 – 14.00 | Solid-State Electrochemical Sensors: Challenges and Opportunities
<i>Federico Maria Vivaldi</i> |
|---------------|---|

ORAL TALK
(Chairman Miroslav Gál)

- | | |
|---------------|---|
| 14.00 – 14.20 | Electrocatalytic Biomass-Derived Carbon Cathodes for Selective Two-Electron Oxygen Reduction and Efficient Electrochemical Hydrogen Peroxide Generation
<i>Erika Bustos</i> |
| 14.20 – 14.40 | Coupled Model of Acid-Base Equilibria and Charge Transport in Pulsed Electric Fields
<i>Táňa Sebechlebská</i> |
| 14.40 – 15.00 | NIR-Based Temperature Measurement in Pulsed Electric Field Systems
<i>Gregor Mydla</i> |

15.00 – 15.30 COFFEE BREAK

ORAL TALK
(Chairman Győző G. Láng)

- | | |
|---------------|--|
| 15.30 – 15.50 | Influence of Temperature and Water on Phosphonium-based Protic Ionic Liquids for Intermediate Temperature PEMFCs
<i>Tommaso Bertolin</i> |
| 15.50 – 16.10 | Influence of Transition Metals on Ni Sulfide-based Electrocatalysts for Alkaline Urea Oxidation Reaction
<i>Jesper T.N. Knijnenburg</i> |
| 16.10 – 16.30 | On the Incorporation of Zeolites into Oxide Coatings During Plasma Electrolytic Oxidation Processing
<i>Rastko Vasilic</i> |
| 16.30 – 16.50 | Use of Magneto-Electropolishing and Electropolishing in the Preparation of TiO₂-Modified Stainless Steel Electrodes to Reveal the Impact of TiO₂ Grain Boundaries on the CO₂ Photoconversion to Ethanol in an Acidic Aqueous Medium
<i>Juan Manríquez</i> |
| 16.50 – 17.10 | Electrodeposition of Nanostructured Multilayer Protective Coatings with Controlled Phase Composition from Polyligand Electrolytes
<i>Antonina Maizelis</i> |

POSTER SESSION

- | | |
|---------------|--|
| 17.30 – 19.00 | Poster Session II (poster P20 to P38) |
|---------------|--|

Wednesday September 23

PLENARY TALK (Chairman Jiří Ludvík)

9.00 – 9.40 Mechanistic Insights of Electrogenerated Chemiluminescence for Enhanced Bioanalytical Applications
Francesco Paolucci

ORAL TALK (Chairman Jiří Ludvík)

9.40 – 10.00 Optimization of Some Important Parameters of Electrochemical Ferrate Production Using Dual Dynamic Voltammetry
Gyöző G. Láng

10.00 – 10.20 Spectroelectrochemical Monitoring of pH Changes in the Pulsed Electric Field
Viliam Kolivoška

10.20 – 10.50 COFFEE BREAK

KEYNOTE TALK (Chairman Soma Veszteg)

10.50 – 11.20 Role of in-situ Spectroelectrochemistry in the Redox Mechanism Determination
Romana Sokolová

ORAL TALK (Chairman Soma Veszteg)

11.20 – 11.40 Elucidating the Mechanism of Initial Hydroxide and Oxide Formation on a Polycrystalline Nickel Surface
Ožbej Vodeb

11.40 – 12.00 Insight into Degradation Mechanism of PFAS on Ti₆O₁₁ Electrodes
Aleksandra Janošević Ležaić

12.00 – 12.45 LUNCH A

12.45 – 13.30 LUNCH B

KEYNOTE TALK (Chairman Jelena D. Gojgić)

13.30 – 14.00 Workforce Needs and Training Opportunities for the European Hydrogen Sector: Insights from the GreenSkills4H2 Project
Evelina Slavcheva

ORAL TALK (Chairman Jelena D. Gojgić)

14.00 – 14.20 From Molecular Electrochemistry to Functional Nanomaterials: Advanced Electrocatalysts for Sustainable Hydrogen Production
Ayman Nafady

14.20 – 14.40 Influence and Interfacial Kinetics of Binary Protic Ionic Liquid Electrolyte Mixtures on Intermediate-Temperature Polymer Electrolyte Membrane Fuel Cells
Yang Tang

14.40 – 15.00 Nickel Sulfide Electrocatalysts via Chemical Bath Deposition for Urea-assisted Hydrogen Production
Kaewta Jetsrisuparb

15.00 – 15.30 COFFEE BREAK

ORAL TALK (Chairman Alketa Lame)	
15.30 – 15.50	Chronoamperometric Oxidation of High-Entropy Alloys Dedicated to Electrooxidation of Methanol <i>Katarzyna Skibińska</i>
15.50 – 16.10	Perforated Microporous Layers for Flooding Mitigation in High-Current-Density CO₂ Electroreduction <i>Eva Vaněčková</i>
16.10 – 16.30	Derivatization-Based HPLC Ammonia Quantification and Time-Resolved Analysis of Lithium-Mediated Nitrogen Reduction <i>Primož Jovanović</i>
16.30 – 16.50	Computationally Efficient Catalyst Agglomeration Model Based on Scaling Relations of Particle Size Distribution <i>Ambrož Kregar</i>

19.00 – 22.00 Farewell Dinner on the Boat

Thursday September 24

PLENARY TALK (Chairman Maciej Cieplak)	
9.00 – 9.40	Impedance Spectroscopy of Hydrogen Underpotential Deposition on Platinum <i>Rafał Jurczakowski</i>
ORAL TALK (Chairman Maciej Cieplak)	
9.40 – 10.00	A Shot Noise Based Approach to Constant Phase Behaviour in Electrochemical Impedance Spectroscopy – the Concept of Frequency Dependent Charge Transfer Impedance <i>Gábor Mészáros</i>
10.00 – 10.20	Reference Potential for Non-Ideal Media <i>Jiří Janata</i>

10.20 – 10.50 COFFEE BREAK

KEYNOTE TALK (Chairman Magdaléna Hromadová)	
10.50 – 11.20	Adaptive IR Compensation and Multi-Nodal Electrometry Control Concepts for Electrolysers: An Instrumentation Roadmap <i>Soma Vesztergom</i>
ORAL TALK (Chairman Magdaléna Hromadová)	
11.20 – 11.40	Phase Transformations in Zirconia upon Electroreduction <i>Christian Rodenbücher</i>
11.40 – 12.00	Electrodeposition from Ionic Liquids and Deep Eutectic Solvents: Co, Ni and Co-Ni Systems <i>Shamsa Khalid</i>

12.00 – 12.10 Closing remarks

12.10 – 12.45 LUNCH A

12.45 – 13.30 LUNCH B