

3rd Challenges on the Renewable Energy Storage

June 28 – July 1, 2026
Chateau Liblice, Czech Republic

PROGRAM

Monday 29th June 2026

09:00-09:15 M. Hof OPENING ADDRESS

Session 1

09:15-10:15 F. Schüth **Ammonia in a future energy system: Synthesis and decomposition by conventional and unconventional catalytic methods**
10:15-10:45 Discussion

10:45-11:30 Coffee Break

11:30-11:50 I. Stephens What factors enable electrochemical nitrogen reduction?
11:50-12:10 M. Behrens Structure-Activity Relationships of Highly-loaded Base Metal Catalysts in CO₂ Hydrogenation and NH₃ Decomposition
12:10-12:30 E. Herrero Atomic-Scale Design Principles for Electrocatalytic Nitrate Reduction toward Sustainable Ammonia Production

12:30-14:30 Lunch

Session 2

14:30-15:30 P. Atanassov **Electrocatalysis Processes and Electrocatalysts Design**
15:30-16:00 Discussion

16:00-16:30 Coffee break

16:30-16:50 N. Kongi Geometric Control of Scaling Relations in Oxygen Electrocatalysis
16:50-17:10 P. Kulesza Electrocatalytic Reductions of Inert Molecules at Copper-Based Metal-Organic-Frameworks: Structure, Reactivity and Durability
17:10-17:30 F. Jaouen Activation procedures for nickel-based anodes in anion-exchange membrane fuel cell
17:30-17:50 P. Mazúr Electrocatalysis of oxygen electrode reactions for enhanced zinc-air flow battery
17:50-18:10 F. Micoud Carbon-capped PtNi/C as active and durable oxygen reduction reaction catalysts in hot and dry PEMFC conditions
18:10-18:30 I. Rutkowska Cobalt-Containing Hexacyanoferrate Networks as Co-catalytic Systems for Electro(Photo)Chemical Oxygen Evolution in Acid Medium

19:00

Dinner

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Tuesday 30th June 2026

Session 3

09:00-10:00 **F. Calle Valejo** **Toward Error Awareness in Computational Electrocatalysis**
10:00-10:30 Discussion

10:30-11:00 *Coffee break*

11:00-11:20 S. Öner Exploration of Electrochemical Kinetics at the Solid-Solution Interphase
11:20-11:40 H. Kristoffersen TiO₂-coated rutile oxide catalysts for acidic oxygen evolution: A design principle
11:40-12:00 D. Rutkowska Single Cu Atom, Sub-nanometer Cu Clusters, and Cu-MOF on TiO₂ for H₂ Photocatalytic Generation
12:00-12:20 R. Urrego-Ortiz 2D covalent organic frameworks and TiN-supported Ru nanoparticles as electrocatalysts for hydrogen evolution
12:20-12:40 T. Hannappel Interfacial studies and stability of protective layers on efficient III-V photoelectrodes

12:40-14:30 *Lunch*

Session 4

14:30-15:30 **B. Roldan** **Embracing Change in Electrocatalysis**
15:30-16:00 Discussion

16:00-16:30 *Coffee break*

16:30-16:50 J. Navarro Model Interfaces for the Electrochemical Reduction of CO₂
16:50-17:10 M. Muhler Enhancing higher alcohol synthesis by using mixed solid catalysts
17:10-17:30 B. Seger Synchrotron based analysis of CO₂ electrolysis devices
17:30-17:50 O. Akdim Modulating Reaction Pathways through Bridging Heteroatom Interfaces for OER and Selective CO₂ Reduction to Ethanol
17:50-18:10 C. van Nguyen Structure and reactivity of Cu₂O nanocubes in ethanol dehydrogenation

18:30 *Concert*

19:30 *Dinner*

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Wednesday 1st July 2026

Session 5

09:00-10:00 K. Tschulik **Bridging Electrocatalytic insights from pico- to Ampere levels – a worthwhile challenge or vain endeavor?**
10:00-10:30 Discussion

10:30-11:00 *Coffee break*

11:00-11:20 P. Röse Understanding the Influence of Iridium Oxide Catalyst State on the Performance in Oxygen Evolution Reaction
11:20-11:40 S. Cherevko Dissolution of Electrocatalysts under Realistic Conditions
11:40-12:00 C. Roth Challenges in operando synchrotron XAS studies in the light of beam damage and transient phenomena
12:00-12:20 J. Drnec Holistic Approach to Device Characterization to Fully Comprehend the Links between the Mass Transport Dynamics, Materials Performance and Degradation Mechanisms.
12:20-12:40 A. Grimaud Oxygenation of small molecules using water as oxygen source

12:40-14:30 *Lunch*

Session 6

14:30-15:30 M. Banares **Complementary spectroscopies for operando spanning from fundamental to engineering. The quest for interoperable Raman data**
15:30-16:00 Discussion

16:00-16:30 *Coffee Break*

16:30-16:50 L. Sharma Ru and Ir synergy in oxygen evolution in acid media
16:50-17:10 M. Prieto TBA
17:10-17:30 K. Skorupska Laterally Condensed Catalysts (LCC): A Functional Interface Approach to Catalysis
17:30-17:50 K. Bouzek Role of mass transfer phenomena in an alkaline water electrolysis
17:50-18:00 B. Roldan
P. Krtil CLOSING REMARKS

19:00 *BBQ dinner*