

3rd Challenges on the Renewable Energy Storage

2026

PROGRAM



*Chateau Liblice
Czech Republic
28th June – 2nd July 2026*



FRITZ-HABER-INSTITUT
MAX-PLANCK-GESELLSCHAFT



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June 28 – July 1, 2026

Chateau Liblice, Czech Republic

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Monday 29th June 2026

09:00-09:15	M. Hof	OPENING ADDRESS
Session 1	B. Roldan	Chair
		Ammonia in a future energy system: Synthesis and decomposition by conventional and unconventional catalytic methods
09:15-10:15	F. Schüth	
10:15-10:45		Discussion
10:45-11:30 <i>Coffee Break</i>		
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 CO ₂ Hydrogenation and NH ₃ Decomposition
12:10-12:30	E. Herrero	Atomic-Scale Design Principles for Electrocatalytic Nitrate Reduction toward Sustainable Ammonia Production
12:30-14:30 <i>Lunch</i>		
Session 2	P. Atanassov	Chair
14:30-15:30	K. Tschulik	Bridging Electrocatalytic insights from pico- to Ampere levels – a worthwhile challenge or vain endeavor?
15:30-16:00		Discussion
16:00-16:30 <i>Coffee break</i>		
16:30-16:50	L. Sharma	Ru and Ir synergy in oxygen evolution in acid media
16:50-17:10	P. Röse	Understanding the Influence of Iridium Oxide Catalyst State on the Performance in Oxygen Evolution Reaction
17:10-17:30	P. Kulesza	Electrocatalytic Reductions of Inert Molecules at Copper-Based Metal-Organic-Frameworks: Structure, Reactivity and Durability
17:30-17:50	S. Cherevko	Dissolution of Electrocatalysts under Realistic Conditions
17:50-18:10	A. Grimaud	Oxygenation of small molecules using water as oxygen source
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 <i>Dinner</i>		

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Tuesday 30th June 2026

Session 3	I. Stephens	Chair
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	TiO ₂ -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 TiO ₂ for H ₂ 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	K. Tschulik	Chair
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 CO ₂
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 CO ₂ electrolysis devices
17:30-17:50	C. van Nguyen	Structure and reactivity of Cu ₂ O nanocubes in ethanol dehydrogenation
18:30		Concert
19:30		Dinner

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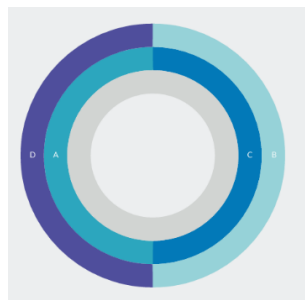
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Wednesday 1st July 2026

Session 5	B. Seger	Chair
09:00-10:00	M. Banares	Complementary spectroscopies for operando spanning from fundamental to engineering. The quest for interoperable Raman data
10:00-10:30		Discussion
10:30-11:00		Coffee break
11:00-11:20	K. Bouzek	Role of mass transfer phenomena in an alkaline water electrolysis
11:20-11:40	E. Lobko	Operando and Post-Mortem Study of Ir/Ti PEMWE Catalysts
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	T. Schmidt	Catalyst Dynamics Under Pulsed Operation: Implications for CO ₂ -Based Energy Storage
12:40-13:00	K. Skorupska	Laterally Condensed Catalysts (LCC): A Functional Interface Approach to Catalysis
12:40-14:30		Lunch
Session 6	P. Krtil	Chair
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	F. Jaouen	Activation procedures for nickel-based anodes in anion-exchange membrane fuel cell
17:10-17:30	P. Mazúr	Electrocatalysis of oxygen electrode reactions for enhanced zinc-air flow battery
17:30-17:50	F. Micoud	Carbon-capped PtNi/C as active and durable oxygen reduction reaction catalysts in hot and dry PEMFC conditions
17:50-18:00	P. Krtil	CLOSING REMARKS
19:00		BBQ dinner

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As of 1st July 2026, we will use the NEW name

Heyrovský Institute of the CAS (HI)

New name, same ambitions and new logo.



Challenges 2028

See you next time!

