## Conference Program

	Challenges on the Renewable Energy Storage
Monda	ay, 02.09.2024
9:00	Martin Hof - J. Heyrovsky Institute of Physical Chemistry, Czech Republic Beatriz Roldán Cuenya - Fritz-Haber-Institut der MPG, Germany Opening Address
	Session Chair Petr Krtil
9:10 10:10	Beatriz Roldán Cuenya - <i>Fritz-Haber-Institut der MPG, Germany</i> Life and Fate of Energy Conversion Electrocatalysts Discussion
	10:40 Coffee Break
	Session Chair Malte Bebrens
11:10	Bert Weckhuysen - Utrecht University, Netherlands Operando Spectroscopy of Catalysts to Make Fuels and Chemicals from Carbon Dioxide
12:10	Discussion
12:40	Jiri Dedecek - J. Heyrovsky Institute of Physical Chemistry, Czech Republic Selective Oxidation of Methane over Metallozeolite Catalysts: DFT Analysis of the Reaction Mechanism
13:00	Dorota Rutkowska-Żbik - Jerzy Haber Institute, Poland DFT Studies on Metal-heteropolyacid-titania Systems for Methane Coupling and H2 Generation
13:20	Katarzyna Skorupska - Fritz-Haber-Institut der MPG, Germany Laterally Condensed Catalysts for Hydrogenation Reaction
	13:40 Lunch Break
	Session Chair Federico Calle-Valejo
15:00	Ib Chorkendorff - <i>Technical University of Denmark, Copenhagen</i> New Routes of Ammonia Synthesis and Decomposition
16:00	Discussion
	16:30 Coffee Break
17:00	Malte Behrens - Christian-Albrechts-Universität zu Kiel, Germany Ammonia as Hydrogen Carrier: Catalysis for Synthesis and Decomposition
17:20	Matthias Arenz - University of Bern, Switzerland How to Find and Understand New Electrocatalysts?
17:40	Pawel J. Kulesza - Faculty of Chemistry, University of Warsaw, Poland Highly Concentrated Iodine/Iodide Redox Electrolytes for Efficient Charge Propagation and Storage
18:00	Iwona Rutkowska - Faculty of Chemistry, University of Warsaw, Poland Optimization and Diagnosis of Electrochemical Charging/Discharging Capabilities of Polytungstate-based Semi-solid/Semi-liquid Solutions
18:20	Olga Kasian - Helmholtz-Zentrum Berlin, Germany Atomically Structured Electrocatalyst Materials with Increased Stability
	19:00 Dinner

Tuesc	lay, 03.09.2024
	Session Chair Bert Weckhuysen
9:00	Graham Hutchings - School of Chemistry, Cardiff University, UK Current Challenges in Catalytic Science to Achieve a Net-zero World
10:00	
4.4.00	10:30 Corree Break
11:00	Jonathan M. Mauß - Max-Planck-Institut für Kohlenforschung, Germany On the Role of Anions in Solid Catalysts with Ionic Liquid Layer (SCILL) for the Selective Hydrogenation of Highly Concentrated Acetylene Streams
11:20	Robert Kosydar - <i>Jerzy Haber Institute of Catalysis and Surface Chemistry, Poland</i> The Activity of Bimetallic PdIr/C and Monometallic Ir/C Catalysts for the Conversion of Furfural via its Hydrogenation and Acetalization
11:40	Zehua Li - <i>Fritz-Haber-Institut der MPG, Germany</i> Structural Dynamics of Pd-based Catalysts in Acetylene Hydrogenation
12:00	Samantha Fagan - School of Chemistry, Cardiff University, UK Pd and ZnO Physical Mixtures for CO2 Hydrogenation to Methanol
12:20	Paulina Summa - Fritz-Haber-Institut der MPG, Germany Optimization of Cu-ZnO Laterally Condensed Catalysts for Methanol Synthesis: On the Influence of the Residence Time
	12:40 Lunch Break
	Session Chair Arno Bergmann
14:30	Yuri Grin - Max-Planck-Institut für Chemische Physik fester Stoffe, Germany Chemical Bonding in Borides-based Catalysts
14:50	Iryna Antonyshyn - <i>Fritz-Haber-Institut der MPG, Germany</i> Catalysis With Bulk Reference Catalysts
15:10	Thomas Lunkenbein - <i>Fritz-Haber-Institut der MPG, Germany</i> The Cu/ZnO/Al2O3 System – Insights into the ZnOx Dynamics by Operando Electron Microscopy
15:30	Wei Nie - <i>Fritz-Haber-Institut der MPG, Germany</i> Operando Characterization of Atomic-scale Structural Transformations in Cobalt Hydroxide Catalysts During Oxygen Evolution Reaction
	15:50 Coffee Break
16:30	Karel Bouzek - Vysoká škola chemicko-technologická v Praze, Czech Republic The PEM Fuel Cell Catalytic Layer Properties in Dependence of Deposition Method: High-capacity Printing as a Case Study
17:10	Arnd Garsuch - BASF SE, Germany Photonic Manufacturing Processes for Components in Electrochemical Cells
17:30	Sonya Calnan - <i>Wolfson School, Loughborough University, UK</i> Overview of Efforts to Overcome the Challenges of Renewable Energy Storage in the United Kingdom

- 17:50 Peter Kúš Charles University, Czech Republic Catalyst-independent Performance Improvement of Proton Exchange Membrane Water Electrolyzer
  - 19:00 Artistic Program Classical Concert
  - 20:00 Conference Dinner

Wednesday, 04.09.2024		
	Session Chair Ib Chorkendorff	
9:00	Núria López - <i>Institut Català d'Investigació Química (ICIQ), Spain</i> Simulations of Dynamic Rearrangements in Electrocatalysts	
10:00	Discussion	
	10:30 Coffee Break	
11:00	Federico Calle-Valejo - University of the Basque Country, Spain On the Computational Optimization of Electrocatalysts	
11:20	Ricardo Urrego-Ortiz - University of Barcelona, Spain Consequences of Gas-Phase Errors in Computational Electrocatalysis	
11:40	Onno van der Heijden - <i>Leiden University, Netherlands</i> Li+ Cations Activate NiFeOOH for Oxygen Evolution in Sodium and Potassium Hydroxide	
12:20	Axel Knop-Gericke - <i>Fritz-Haber-Institut der MPG, Germany</i> The Combination of In-situ X-ray Resonant Photoelectron Spectroscopy and Density Functional Theory Calculations: A Useful Tool for the Understanding of Electrochemical Reactions	
	12:40 Lunch Break	
	Session Chair Matthias Arenz	
14:30	Iryna Zenyuk - University of California, Irvine, USA Understanding Structure to Cell Performance Relations for IrOx Amorphous and Crystaline Catalysts for PEM Water Electrolyzers	
15:30	Discussion	
	16:00 Coffee Break	
16:30	Petr Krtil - J. Heyrovsky Institute of Physical Chemistry, Czech Republic Ru and Ir Synergy in Oxygen Evolution in Acid Media	
16:50	Arno Bergmann - Fritz-Haber-Institut der MPG, Germany The Oxygen-Evolving State of Co-based Electrocatalysts: Size effects and the Role of Fe Decoration	
17:10	Tomas Hrbek - Charles University, Czech Republic Fcc Ru Formed in Bimetallic Ir-Ru Alloy Leads to Enhanced Performance: Operando PEM-WE Study Using Synchrotron X-ray Scattering	
17:30	Robert Schlögl - Alexander-von-Humboldt Stiftung / Fritz-Haber-Institut der MPG	

Green Deal : A Re-design of a European Project of Common Interest

19:00 Dinner

Challenges on the Renewable Energy Storage, 1st-4th September 2024, Castle Liblice, Czech Republic