

Program

Sunday, October 14, 2018

09:00 – 16:00	Registration	
12:30	<i>LUNCH</i>	
14:00 – 14:15	Ulrike Kramm	Opening remarks
	<u>Chair: Ulrike Kramm</u>	
14:15 – 15:15	Jin Suntivich	Designer Catalysts: A Material-Centric Approach to the Energy Storage Challenge
15:15 – 16:15	Tanja Graf	Designing advanced energy materials for automotive applications
16:15 – 17:15	Bettina Lotsch	“Soft photocatalysis”: Carbon-based materials for solar fuel production
17:15 – 18:15	Anke Weidenkaff	Substitution and Recycling of Critical Elements in Energy Technologies
18:30 – 20:00	<i>BUFFET SUPPER / Informal get together</i>	

Monday, October 15, 2018

07:30	<i>BREAKFAST</i>	
	<u>Chair: Maria Escudero-Escribano</u>	
08:30 – 09:20	Elena Savinova	Hydrogen Oxidation on mono- and bimetallic Ni electrodes in alkaline media
09:20 – 09:45	Elena S. Davydova	Challenges in the development of Ni-based electrocatalysts for hydrogen oxidation reaction
09:45 – 10:10	Guillaume Braesch	Comparison of noble and promising non-noble materials as electrocatalyst for the Borohydride Oxidation Reaction

Program

Monday, October 15, 2018

- 10:10 – 10:40 *COFFEE BREAK*
- Chair : Christina Roth
- 10:40 – 11:30 **Stefania Specchia** **3D multi-physics, multi-phase, and non iso-thermal modeling of PEMFC and DMFC**
- 11:30 – 11:55 Jonathan Quinson Systematic studies of supported electrocatalysts for the oxygen reduction reaction: from surfactant-free colloidal syntheses to method development
- 11:55 – 12:20 Natascha Weidler Effect of Structure Forming Agents on the Porosity of the Carbon Structure of Fe-N-C catalysts for the Oxygen Reduction Reaction
- 12:20 – 12:30 **Conference Photo**
- 12:30 *LUNCH*
- Chair: Serena Corr
- 14:00 – 14:50 **Nina Balke** **In-situ characterization of energy storage materials on the nanoscale**
- 14:50 – 15:15 Samuel Booth Microwave synthesised $H_2V_3O_8$ nanowires: a study of lithium intercalation
- 15:15 – 15:45 *COFFEE BREAK*

Program

Monday, October 15, 2018

Chair: Bai-Xiang Xu

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| 15:45 – 16:35 | Nancy Sottos | Autonomous Intervention Strategies for Electro-Chemo-Mechanical Stability in Li-ion Batteries |
| 16:35 – 17:00 | Peter Stein | Under stress: enhancing the low diffusivity in lithium-ion batteries through surface stresses and the elastic fields of material defects |
| 17:00 – 17:25 | Beth Johnston | Muon spin spectroscopy for studying local ionic diffusion in electrode materials for Li ion batteries |
| 17:30 – 18:00 | Postersession even poster numbers | |
| 18:00 – 18:30 | Postersession odd poster numbers | |
| 18:45 – 19:00 | Stefan Jorda | About the Wilhelm and Else Heraeus Foundation |
| 19:00 | <i>HERAEUS DINNER at the Physikzentrum
(cold & warm buffet, free beverages)</i> | |

Program

Tuesday, October 16, 2018

07:30	<i>BREAKFAST</i>	
	<u>Chair: Fabio Dionigi</u>	
08:30 – 09:20	Jennifer Strunk	Photocatalytic CO₂ Reduction: An Alternative Source of Renewable Fuels?
09:20 – 10:10	Ivelina Zaharieva	Manganese oxides as water oxidation catalysts
10:10 – 10:35	Anna Mechler	Impact of Fe-impurities on a Ni-Co-Oxide Catalyst for Oxygen Evolution
10:35 – 11:05	<i>COFFEE BREAK</i>	
	<u>Chair : Jin Suntivich</u>	
11:05 – 11:55	Anna Fischer	Materials for ORR and OER - from platinum free electrocatalysts to advanced photoanodes
11:55 – 12:20	Alexandr Oshchepkov	Tuning the Activity of Ni in the Hydrogen Electrode Reactions and Borohydride Oxidation Reaction by Varying its Surface State
12:20 – 12:45	Kathrin Ebner	A novel synthesis approach for Fe/N/C-type ORR-catalysts - insights on composition and activity
12:45	<i>LUNCH</i>	
	<u>Chair: Ivelina Zaharieva</u>	
14:15 – 15:05	Christina Roth	In-operando characterization of novel fuel cell catalysts using XAS and DRIFTS
15:05 – 15:30	Viktoriiia Saveleva	Degrading of the Carbon Support in Fe/N/C Catalysts used for the Reduction of Oxygen in PEM Fuel Cells

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Tuesday, October 16, 2018

15:30 – 16:00 *COFFEE BREAK*

Chair : Christina Birkel

16:00 – 16:50 **Kimberly See** **The Behavior of Multivalent Cations in
Next-Generation Battery Systems**

16:50 – 17:15 Elinor Josef Replacing metals: free-standing carbon
fibers derived from a poly(ionic liquid) as
a current collector

17:15 – 17:40 Oliver Clemens New Battery Technologies based on
Fluoride Ions

17:40 – 19:00 **Discussion table**

19:00 *DINNER*

Program

Wednesday, October 17, 2018

07:30	<i>BREAKFAST</i>	
	<u>Chair: Nina Balke</u>	
08:30 – 09:20	Serena Corr	A new series of active materials for safer energy storage
09:20 – 09:45	Saneyuki Ohno	Development of the solid electrolytes and their applications for solid-state Li-S batteries
09:45 – 10:10	Molleigh Preefer	Crosslinked disulfide polymers for stable cycling in Lithium-Sulfur batteries
10:10 – 10:35	Filip Podjaski	Toward New Solar Batteries: Graphitic Carbon Nitrides Enabling Direct Solar Energy Storage
10:35 – 11:00	<i>COFFEE BREAK</i>	
	<u>Chair : Anna Mechler</u>	
11:00 – 11:50	Maria Escudero-Escribano	Elucidating the Active Phase of Pt-Based Electrocatalysts for Oxygen Reduction
11:50 – 12:15	Fabio Dionigi	Octahedral Fuel Cell Nano Catalysts
12:15 – 12:40	Anders Jensen	Nanoporous Pt-based network catalysts for oxygen reduction
12:40 – 13:05	Ulrike Kramm Christina Birkel Bai-Xiang Xu	Poster awards and closing words
13:05 – 14:30	<i>LUNCH</i>	

End of the seminar and Departure