

Solid-Water Interfaces at the Molecular Level

805. WE-Heraeus-Seminar

25 February – 01 March 2024

at the Physikzentrum Bad Honnef, Germany

**WILHELM UND ELSE
HERAEUS-STIFTUNG**



Program

Sunday, 25 February 2024

17:00 – 21:00 Registration

18:30 *BUFFET SUPPER and informal get-together*

Monday, 26 February 2024

08:00 *BREAKFAST*

08:50 Scientific organizers **Welcome words**

09:00 – 10:00 Marie Gaigeot **Modeling Aqueous Interfaces**

10:00 – 11:00 Elias Nakouzi **Interfacial Solution Structure Controls Pathway and Dynamics of Particle Attachment, Aggregation, and Self-assembly**

11:00 – 11:30 *COFFEE BREAK*

11:30 – 12:30 Ellen Backus **Reactions at the Solid-water Interface**

12:30 – 12:40 **Conference Photo** (in front of the lecture hall)

12:40 – 14:00 *LUNCH BREAK*

Program

Monday, 26 February 2024

14:00 – 15:00	Eric Borguet	Hydrogen Bonding and Ultrafast Dynamics at Aqueous-oxide Interfaces
15:00 – 16:00	Bernhard Reischl	Atomistic Simulation of Heterogeneous Nucleation on Mineral Surfaces
16:00 – 16:30	<i>COFFEE BREAK</i>	
16:30 – 17:30	Remco Hartkamp	Do Surface Reactions Perturb the Electric Double Layer Structure?
17:30 – 17:45	Stefan Jorda	About the Wilhelm and Else Heraeus Foundation
17:45 – 18:30	Discussion Session 1 <i>(discussion leader Adam Foster)</i>	
18:30	<i>DINNER</i>	

Program

Tuesday, 27 February 2024

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Andrea Auer	Visualizing Electrified Solid-liquid Interfaces
10:00 – 11:00	Philipp Rahe	High-resolution Real-space Imaging of a Mineral Surface: Water Adsorption on Calcite(104)-(2×1)
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Igor Siretanu	Local Surface Charge, Ions and Water Structuring at Solid-electrolyte Interfaces: Insights from AFM Spectroscopy
12:30 – 14:00	<i>LUNCH BREAK</i>	
14:00 – 15:00	Discussion Session 2 (discussion leader Ricardo Garcia)	
15:00 – 16:00	Poster flash	
16:00 – 16:30	<i>COFFEE BREAK</i>	
16:30	Poster Session 1	
18:30	<i>DINNER</i>	

Program

Wednesday, 28 February 2024

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Olaf Magnussen	X-ray Scattering Studies of the Molecular Structure at Electrochemical Interfaces
10:00 – 11:00	Frank Heberling	Chemical-thermodynamic Models for Mineral-water Interfaces, from Free Surfaces to Nanoconfined and Nanostructured Systems
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Thorsten Geisler-Wierwille	Real-time, In-situ Investigations of Glass-water Reactions at the Micrometer Scale by Fluid-cell Raman Spectroscopy
12:30	<i>LUNCH BREAK</i>	
14:00 – 18:00	Excursion	
18:30	<i>HERAEUS DINNER</i> (social event with cold & warm buffet with complimentary drinks)	

Program

Thursday, 29 February 2024

08:00	<i>BREAKFAST</i>	
09:00 – 11:00	Poster session 2	
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Discussion in small groups	
12:30 – 14:00	<i>LUNCH BREAK</i>	
14:00 – 15:00	Ester Alarcón Lladó	Understanding and Controlling Nanoscale Processes at Metal Electrodes with Electrochemical AFM
15:00 – 16:00	Hendrik Bluhm	Interplay of Ions and Surfactants at Liquid-vapor Interfaces
16:00 – 16:30	<i>COFFEE BREAK</i>	
16:30 – 17:30	Benjamin Murray	Ice in the Earth's Atmosphere
17:30 – 18:30	Discussion in small groups	
18:30	<i>DINNER</i>	

Program

Friday, 01 March 2024

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Denis Gebauer	Dense Liquid Minerals: Mechanisms and Applications
10:00 – 11:00	Discussion Session 3 <i>(discussion leader: Jim DeYoreo)</i>	
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Scientific organizers	Closing
12:30	<i>LUNCH</i>	

End of the seminar and departure