

# Summer School Solvation Science 2015

## Monday, 25<sup>th</sup> May

(public holiday in Germany)

Welcome and get-together (starting ca. 6 pm)

## Tuesday, 26<sup>th</sup> May

Advanced Modules (theoretical and experimental hands-on courses)  
at participating institutes (Bochum, Dortmund, Essen, Mülheim, Oberhausen, Düsseldorf)

## Wednesday, 27<sup>th</sup> May

Advanced Modules (theoretical and experimental hands-on courses)  
at participating institutes (Bochum, Dortmund, Essen, Mülheim, Oberhausen, Düsseldorf)

## Thursday, 28<sup>th</sup> May

09:00 – 09:15    Marcus Petermann, Dean GSS  
*“Welcome to the Summer School Solvation Science”*

### Session Electrochemistry

09:15 – 10:45    Nicolas Plumere, RUB  
*“Introduction into the basic concepts of electrochemistry”*

10:45 – 11:15    Coffee Break

11:45 – 12:00    Candace Chan, Arizona State University, USA  
*“Solid-electrolyte interphases in high energy density silicon-based lithium battery electrodes”*

12:00 – 12:45    Katrin Domke, MPI Polymer Research, Mainz, Germany  
*“Raman under water - pushing sensitivity and spatial resolution”*

12:45 – 14:15    Lunch

### Session THz

14:15 – 15:45    Janne Savolainen, RUB  
*“Introduction into the basic concepts of THz spectroscopy”*

15:45 – 16:15    Coffee Break

16:15 – 17:00    Robert Falconer, University of Sheffield, UK  
*“The Application of Microcalorimetry and Terahertz Spectroscopy to Study the Interaction between Proteins, Cosolutes and Water”*

17:00 – 17:45    Charles Schmuttenmaer, Yale University, USA  
*“The Nuts and Bolts of Probing Liquid Dynamics and Low Frequency Modes of Organic Molecular Crystals with THz Spectroscopy”*

17:45 Dinner in RUB Conference Center  
18:30 – 19:15 Klaus Roth, FU Berlin, Germany  
*"Beer – from the first glass to a hangover"*

## Friday 29<sup>th</sup> May

### Session Catalysis

09:15 – 10:45 Bill Morandi, MPI for Coal Research  
*"Introduction into the basic concepts of organic catalysis"*  
10:45 – 11:15 Coffee Break  
11:15 – 12:00 Stefan Matile, University of Geneva, Switzerland  
*"Unorthodox Interactions in Organocatalysis"*  
12:00 – 12:45 Karl Anker Jørgensen, University of Aarhus, Denmark  
*"Organocatalysis as a toolbox for diversity-oriented synthesis"*  
12:45 – 14:15 Lunch

### Session Molecular Dynamics

14:15 – 15:45 Lars Schäfer, RUB  
*"Introduction into the basic concepts of MD simulations"*  
15:45 – 16:15 Coffee Break  
16:15 – 17:00 Marie-Pierre Gaigeot, University Évry-Val d'Essonne, France  
*"Solvation and vibrational spectroscopy at solid oxyde/liquid water interfaces from AIMD simulations"*  
17:00 – 17:45 Mark Tuckerman, New York University, USA  
*"Going down Feynman's path: A first-principles approach to nuclear quantum effects in solvation and transport"*  
17:45 – 18:00 Closing  
18:00 Barbecue at Beckmanns Hof