

**Program Workshop Research Area B - 08.12.2015**  
**RUB Conference Center**



08:30 - 09:00 Put up posters

09:00 - 09:10 **Welcome and overview Research Area B - Roland Winter**

**Chair: Sanchez-Garcia**

09:10 - 09:30 **Berger**  
*Conformations and dynamics of small model cyclic tetrapeptides*

09:30 - 09:50 **Esser**  
*Understanding hydrophobic effects in THz spectra of amino acids in water*

09:50 - 10:10 **Mittal**  
*Biomolecular interactions in explicit solvent*

10:10 - 10:30 **Gopal**  
*Molecular thermodynamics of trypsin inhibitor binding: the role of the solvent*

10:30 - 11:00 Coffee break & poster session

**Chair: Schäfer**

11:00 - 11:20 **Pattni**  
*Spatially resolved solvent dynamics and thermodynamics at various sites of MT-1MMP*

11:20 - 11:40 **Böhm**  
*THz spectroscopy and thermodynamics: The hydrophobic effect*

11:40 - 12:00 **Persson**  
*Local solute-specific signatures in the solvent molar entropy*

12:00 - 12:20 **Xu**  
*Protein dynamics in reverse micelles: a tale of conformation, solvation and encapsulation*

12:20 - 12:40 **Knake**  
*Terahertz Spectroscopy of Aqueous Solution Under High Pressure*

12:40 - 13:40 Lunchbuffet & poster session

**Chair: Schuhmann**

13:40 - 14:00 **Nowaczyk /Rögner**  
*Monitoring the interaction of photosystem 2 with its environment: Introduction of a new device*

14:00 - 14:20 **Lubitz**  
*Biological water splitting – the substrate/solvent interface*

14:20 - 14:50 **Ebbinghaus / Schulz**  
*A zink-finger hydrolase model system as a crosslinking research project*

14:50 - 15:10 **Esselborn**  
*Solvation effects on inter-protein electron transfer and intra-protein proton transfer*

15:10 - 15:30 **Senske**  
*Protein stability in crowding and confinement – a new role for water in protein folding?*

15:30 - 16:00 Coffee break & poster session

**Chair: Plumeré**

16:00 - 16:20 **Held**  
*The impact of activity coefficients on bioreactions*

16:20 - 16:40 **Luong**  
*Combined pressure and cosolvent effects on enzyme activity*

16:40 - 17:00 **Decaneto**  
*Cobalt (II) substitution of the zinc(II) ions of membrane-type 1 matrix metalloproteinase*

17:00 - 17:20 **Gnutt**  
*RNA hairpin folding in the crowded cell*

17:20 - 17:50 Coffee break & poster session

**Chair: Herrmann**

17:50	-	18:10	<b>Rüdiger</b> <i>Combining electrochemistry and EPR to study enzymes in redox hydrogels</i>
18:10	-	18:30	<b>Kopiec</b> <i>Bioelectrocatalysis in redox-active hydrogel films – solvation effect on redox potential</i>
18:30	-	18:50	<b>Schuhmann</b> <i>Scanning photoelectrochemical microscopy - a new tool to visualize light-induced bioelectrochemical processes with high lateral resolution</i>
18:50	-	19:10	<b>Buesen</b> <i>Electroanalytical methods and modeling to quantify kinetic constants related to biocatalytic activity under various solvent conditions</i>