

Solvation Science Meets High Pressure Bioscience: RESOLV – 10th IMBP – DFG FOR 1979

29 September - 03 October 2019, Dortmund U, 44137 Dortmund

Joint conference of the German Cluster of Excellence RESOLV (Ruhr Explores Solvation Science), the 10th International Meeting on Biomolecules under Pressure (IMBP) and the DFG research unit FOR 1979

The IMBP meetings deal with fundamental questions regarding high-pressure molecular bioscience, including topics revolving around hydration and conformational fluctuations of proteins, the exploration of the free-energy landscape and high-energy conformers of biomolecules using pressure-axis experiments, and related questions in the area of deep sea biology. This time we are planning to expand the participating community, bringing together people from the "traditional" IMBP group, researchers from our DFG Research Unit FOR 1979 "Exploring the Dynamical Landscape of Biomolecular Systems by Pressure Perturbation", and the RESOLV community, i.e. researchers interested in Solvation Science. FOR 1979 focuses on a molecular level-based bottom-up description of pressure effects on solutions of biomolecules, and the use of pressure modulation to reveal important mechanistic information on fundamental biomolecular processes and reactions. Indispensable for the state-of-the-art molecular-level understanding are tight links between experiment and simulation. RESOLV is an interdisciplinary research project of the Ruhr University Bochum and the TU Dortmund University, as well as four other institutions in the German Ruhr area. Since 2012, about 200 scientists cooperate to explore how the solvent is involved in the control, mediation and regulation of chemical and biochemical reactions. RESOLV also tackles the challenge of how to control conformational dynamics and chemical reactivity under stressed solvent conditions, including low temperature, high pressure and confinement.