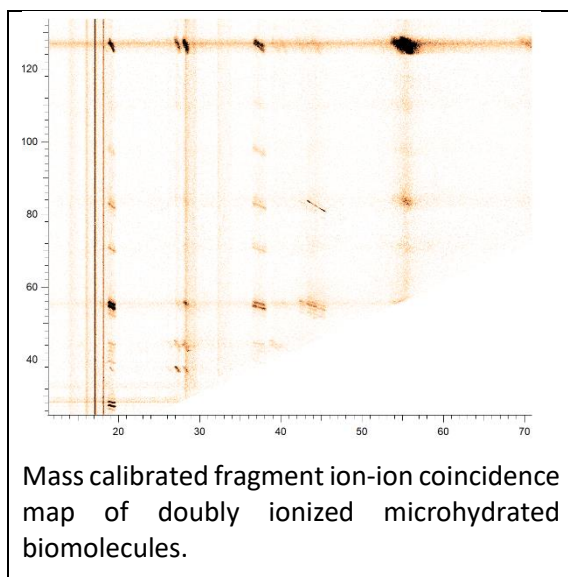


At the Institute of Physics, University of Freiburg, we are offering a

PhD position (m/f/d)

on

XUV Photoelectron and Photoion Spectroscopy of Molecular Clusters using large-scale Radiation Facilities



XUV Photoelectron and Photoion spectroscopy allows deep physical insight into the energetics and dynamics of isolated molecular species and can have advantages over other spectroscopic techniques. Many highly-relevant sample systems from the fields of biology and chemistry naturally occur in a condensed phase solution environment, making the application of photoelectron spectroscopy challenging. The interaction with the environment can drastically change the energetics, dynamics and nature of relaxation processes triggered by the interaction with light. Molecular clusters offer a possibility to bridge the gap between the gas phase and the condensed phases, by allowing to apply gas phase experimental techniques while building up the environment molecule by molecule.

We are looking for a highly motivated PhD student to conduct photoionization studies of molecular clusters using XUV radiation from synchrotron sources and free electron lasers. The studies will include static as well as time-resolved measurements focussing on the energetics and dynamics of photoionized micro-solvated biomolecules and solvated electron systems. Examples for recent relevant publications can be found below. [1-3]

The successful candidate will have the opportunity to work on the planning, preparation and execution of experimental campaigns as well as on the data post processing in the group of Prof. Stienkemeier in Freiburg. Candidates should have a strong interest in experimental Atomic and Molecular Physics or Physical Chemistry. Previous experience with XUV radiation, vacuum equipment, or programming can be advantageous but is not required. The PhD project will be embedded in the graduate school [DynCAM](#), which provides an excellent environment for the research and career development of the doctoral candidate, including extended research stays with international collaborators during the PhD project.

Applications should be sent as a single pdf-file including a letter of motivation, a CV, certificates of the university degrees (with grades) and the contact details of at least two referees before **January 31, 2024**. The search will continue until the position is filled.

1. Asmussen, J.D., R. Michiels, U. Bangert, et al. *J. Phys. Chem. Lett.*, 2022. **13**(20)
2. Hartweg, S., J. Barnes, B.L. Yoder, et al. *Science*, 2023. **380**(6650)
3. Hartweg, S., M. Hochlaf, G.A. Garcia, et al. *J. Phys. Chem. Lett.*, 2023

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