

PhD position

Proteins in crowded environments studied by confocal fluorescence microscopy

The research activities of our group aim to establish a fundamental, physics-based understanding of the function of bio-macromolecular systems. In this respect proteins and (protein based) macromolecular complexes, also within in their cellular context, are of particular interest for our research topics. The experimental techniques used are confocal fluorescence spectroscopy and single molecule wide-field microscopy. Thereby fluorescence correlation spectroscopy (FCS), multi-color detection, and Förster resonance energy transfer (FRET) are employed in our research projects.

Candidates (physicist, chemist, biophysicists) should have good experimental skills in working with optical research instruments, as well as in performing experiments and data analysis. Background in optics and laser spectroscopy is preferred.

We are seeking a highly motivated person to join our research team to work on a project dealing with the impact of crowding agents on the dynamics and the interaction of proteins. By employing time-resolved fluorescence spectroscopy on a confocal microscope, conformational dynamics of FRET based biosensors should be characterized depending on their state of substrate/metabolite binding. In order to mimic cytosolic environments the studies will be performed in solutions with highly concentrated macromolecular crowder agents (Kempe et al., *Anal. Chem.* **89**, 694, 2017).

We offer the possibilities to work with state-of-the-art equipment at the interface between physics and molecular biology.

The possibility to join the “*International Helmholtz Research School of Biophysics and Soft Matter*” is given for the successful candidate

(http://www.ihrs-biosoft.de/ihrs-biosoft/EN/Home/home_node.html)

The position will be available for 3 years (50 % 13 TVÖD-L salary).

Please send your application, including a letter of motivation and a CV, by **May 12, 2017** to:

Prof. Dr. Jörg Fitter
I. Physikalisches Institut, AG Biophysik
RWTH Aachen
Sommerfeldstrasse 14
D-52056 Aachen, Germany
Tel. ++49 241 80 27209
E-Mail: fitter@physik.rwth-aachen.de
<http://www.institut-1a.physik.rwth-aachen.de/go/id/ieci>

