

30.09.2019

We are looking to recruit a

PostDoc: In situ monitoring of structural changes of proteins - Neutron scattering combined with IR-spectroscopy

The successful applicant will be employed by the RWTH Aachen, but the work will be conducted at Heinz Maier-Leibnitz Zentrum (MLZ) in Garching, nearby Munich. The work will be performed in close cooperation with the Jülich Centre for Neutron Science (JCNS) of the Forschungszentrum Jülich. The successful candidate will develop a novel in-situ infrared (IR) spectrometer at the small-angle neutron scattering (SANS) instruments operated by JCNS in order to monitor the structural changes involved with the different states of proteins by a combination of neutron scattering and infrared absorption on the very same sample. At the MLZ JCNS is operating a suite of high performance neutron scattering instruments. In addition it is actively pursuing a research program in soft matter science offering a highly interdisciplinary and international environment.

Your job:

- Build-up of a novel IR spectrometer based on Quantum Cascade Lasers
- Development of sample cells allowing IR and SANS in situ on the very same sample
- Sample characterization by CD-spectroscopy, UV-visible and IR spectroscopy
- Performing neutron scattering experiments at the MLZ in Garching and world-wide
- Presentation of the results at conferences and publication of scientific articles
- Interdisciplinary teamwork and supervision of Bachelor and Master students

Your profile:

- Master degree in Physics or Chemistry and a PhD in a related field ideally with a focus on the development of new measurement set-ups
- Knowledge of scattering techniques is not required but would be a plus
- Knowledge in IR spectroscopy and designing optical set-ups would be desired
- Data analysis using computer programs will also be an important aspect of the project
- Experience with computer programming for data analysis (python or similar) is advantageous
- IR spectra modelling and interpretation skills would be desirable
- Good communication skills in English are a requirement
- Cooperative and structured working style and passion for science and new ideas
- Fun in writing publications should be present in the successful candidate

Our offer:

- We are an innovative research group with experience in both fields SANS and IR spectroscopy and in-situ techniques.
- We are equipped with excellent experimental methods embedded in the international research environment of the JCNS.
- We offer a PostDoc position limited to three years including salary and all social benefits (100% TVÖD E13). You will be employed at the RWTH Aachen University.
- The place of employment will be Garching nearby Munich.
- Chance of participating in (international) conferences and project meetings

We aim to employ more women in this area and therefore particularly welcome applications from women. We also welcome applications from disabled persons. Deadline of submission is October 28th 2019.

Please submit your enquiries and application (including letter of motivation, CV and examination results as pdf files) to

Dr. Tobias Schrader

Email: t.schrader@fz-juelich.de

For further information please contact Dr. Tobias Schrader or visit our webpages, http://www.fz-juelich.de/jcns/EN/Home/home_node.html and <http://www.mlz-garching.de>