

Ph.D. positions are open in the field of single molecule fluorescence spectroscopy and microscopy

J. Heyrovský Institute of Physical Chemistry offers Ph.D. positions under an EXPRO-Project: Concert of Lipids, Ions, and Proteins in Cell Membrane Dynamics and Function

Job description:

The role of cellular membranes goes far beyond protecting the integrity of the cell interior and separating it from the extracellular space. Its complex structure allows cells to communicate with the exterior and is also the site of key cellular regulatory processes that involve lipids, proteins and salt ions. In order to gain insight into these complex processes and potentially influence them therapeutically, an atomistic understanding is imperative.

The offered PhD positions are a part of a large EXPRO-project funded by Czech Science Foundation (2019-2023) with the major aim to understand how the interplay between membranes with complex lipid composition and topology, and the regulatory effects of ions modulate the action of membrane proteins and other membrane processes. Within this project experiments performed in the Department of Biophysical Chemistry of Heyrovský Institute will be combined with computer simulations performed in by the group of Pavel Jungwirth in the Institute of Organic Chemistry and Biochemistry.

The candidates will use various advanced single molecule fluorescence techniques such as FCS (fluorescence correlation spectroscopy), SPT (single particle tracking), FRET (Förster resonance energy transfer) and various fluorescence imaging techniques. The candidates will be involved in all stages of the research including experimental work, analysis and interpretation of the obtained data, design of new experiments, scientific discussions and presentation at international conferences and publication of the achieved results. We are searching highly motivated candidates who would like to work in a world-wide respected biophysical research team.

General requirements:

- Master degree in physics, chemistry or related fields.
- Good communication skills in written and spoken English.
- Previous experience with biophysical and biochemical methods including fluorescence techniques is of considerable benefit.
- Good programming skills in MATLAB or similar are welcome.

Start of the position: 1st of October, 2019

Job location: J. Heyrovský Institute of Physical Chemistry, Prague, Czech Republic

Documents required from the candidate:

A motivation letter with a CV and brief summary of previous research activities, a copy of your diploma, 1-2 references including their names, job titles, institution, address, email and phone number.

The application with the required documents must be sent via e-mail to: Piotr Jurkiewicz (piotr.jurkiewicz@jh-inst.cas.cz) and Radek Šachl (radek.sachl@jh-inst.cas.cz).

Application deadline: 15th of March 2019

Further details concerning the job position can be obtained from Piotr Jurkiewicz (piotr.jurkiewicz@jh-inst.cas.cz) or Radek Šachl (radek.sachl@jh-inst.cas.cz).

By submitting the application you confirm that all personal data you have sent to us are true.