

Doctoral Position(s)

The Electron Spin Resonance (ESR) Spectroscopy Research Group of Prof. Dr. Benesh Joseph located in the Physics Department of Freie Universität Berlin is looking for two Doctoral candidates.

Our group employs ESR spectroscopy techniques to investigate the biophysical and mechanistic basis for the function of membrane transport protein complexes. Methodological developments for studying such heterooligomeric complexes in their native environments is another major focus of the group. Our spectrometers can operate over a wide range of frequencies (S, X, Q, and W band) and are equipped for determining both dipolar and hyperfine interactions, laser excitation and transient ESR spectroscopy. The sample preparation laboratories house modern instruments for membrane protein expression and purification. With a cosmopolitan outlook and a highly vibrant and collaborative research environment, Berlin is an exciting place to live and work.

The projects aim to unravel the molecular principles underlying protein folding and lipid transport by heterooligomeric membrane complexes, which are potential targets for novel drugs. The candidate will use advanced techniques in membrane protein biochemistry/biophysics and ESR spectroscopy to elucidate the dynamic basis for the function of these complexes and how potential drugs candidates modulate their behavior. Application is also welcome from candidates having keen interest to further develop new methodologies combining spectroscopic and biochemical approaches for in-cell/in-situ observation of membrane protein complexes.

Requirements:

- a Master in (Bio)Physics, (Bio)Physical Chemistry or Biochemistry
- experience in (membrane) protein expression and purification is desired
- knowledge/experience in ESR spectroscopy techniques or another biomolecular spectroscopy would be helpful
- scientific curiosity, good communication skills, proficiency in English, and an ability to work in an international environment

The positions are initially available for a duration of one year. After a successful evaluation, extension will be given for another three years. The salary is based on the Collective Agreement for the German Public Service (E13, TV-L FU). The University advocates gender equality and therefore encourages women to apply. People with disabilities are given preference if equally qualified. The Freie Universität Berlin cannot cover the costs for the interviews.

Interested candidates may send an electronic application (including motivation letter, CV, names of referees, and copies certificates in one PDF file) to Prof. Dr. Benesh Joseph, Freie Universität Berlin, Fachbereich Physik, Raum 0.4.39, Arnimallee 14, 14195 Berlin, Germany. Tel: +49 69 798 46430, Email: joseph@biophysik.uni-frankfurt.de