PhD Position

Bioelectrochemical Studies of Respiratory Membrane Proteins

The University of Strasbourg, France – Bioelectrochemistry and Vibrational Spectroscopy Group, Complex Matter Chemistry Institute (UMR 7140) – invites applications for a fully funded 3-year PhD position within an ambitious interdisciplinary project at the interface of physical chemistry, biophysics, and nanoscience.

This project addresses fundamental questions related to electron and proton transfer mechanisms in bacterial respiratory membrane proteins, with a particular focus on oxygen reduction. The successful candidate will combine bioelectrochemistry and advanced spectroscopy to investigate catalytic processes at the molecular level. State-of-the-art approaches will be employed, including protein film voltammetry (PFV) on enzymes reconstituted in nanodiscs, enabling controlled studies in a native-like membrane environment. The project includes the development of new electrochemical assays, the study of lipid–protein interactions, and the analysis of quinone binding sites. Complementary FTIR and Raman spectroscopy will provide detailed insights into protonation states and structural dynamics.

The PhD will be carried out within a highly collaborative international network involving three universities, providing access to a broad range of complementary expertise and advanced instrumentation. The group benefits from strong international visibility and collaborations and is located on the central campus of the University of Strasbourg, a leading European research environment.

More information: https://complex-matter.unistra.fr/equipes-de-recherche/laboratoire-de-bioeletrochimie-et-spectroscopie/

Candidate Profile: We are seeking a highly motivated, curious, and autonomous candidate with a strong background in physical chemistry, biophysics, or bioelectrochemistry. Experience or interest in spectroscopy, electrochemistry, nanotechnologies, or membrane proteins will be highly valued. The candidate should demonstrate strong analytical skills, enthusiasm for interdisciplinary research, and a good command of English.

What We Offer

- A fully funded 3-year PhD position in a dynamic and supportive environment
- Training in cutting-edge experimental techniques at the interface of disciplines
- Opportunities for national and international collaboration and mobility
- A project with strong potential for high-impact publications and career development
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Application / Candidature

- Deadline: **10/05/2026**
- Application procedure: Please send a CV, your Master's transcripts, the names of two referees, and a motivation letter to: hellwig@unistra.fr
- File size limit: 8 MB
- Incomplete applications will not be considered