

The Rossendorf Beamline (ROBL) is one of the 12 Collaborating Research Group (CRG) beamlines of the European Synchrotron Radiation Facility (ESRF) in Grenoble, France. It is owned and operated by IRE (The Institute for Resource Ecology (IRE)) at The Helmholtz - Zentrum Dresden - Rossendorf e.V. (HZDR), and is dedicated to actinide sciences and radioactive waste disposal research. The beamline consists of four experimental stations dedicated to XAFS, XRD and XES in an alpha-lab environment. <https://www.esrf.fr/UsersAndScience/Experiments/CRG/BM20>.

The University of Helsinki (Finland) is the oldest and largest institution of academic education in the country. The university is an international scientific community of 40,000 students and researchers. The faculty of science is hosting the Center for X-ray spectroscopy (XRD, XAS, XES), the Radiochemistry unit (Actinide sample preparation) and the Accelerator laboratory (ion beam analysis and material modifications) that are leading research in material science among many other fields.

Through a unique collaboration with both University of Grenoble Alpes and University of Helsinki, the Rossendorf Beamline is offering the following position for the realization of a PhD as follow:

PhD student (m/f) (3 years)

The goal of the project is to advance fundamental understanding of irradiation effects in the nuclear fuel through the implantation of ions in uranium bearing compounds. The as-prepared materials will be characterized through various laboratory techniques (XRD, microscopy, *etc*) available at the University of Helsinki and by synchrotron radiation techniques (XRD, XES, XAS) at the Rossendorf beamline.

The position will be available from September 2024. The employment contract is limited to three years. The student will spend the first year of his PhD at the University of Helsinki (Finland) for the preparation and characterization of the ion implanted samples. The second and third year of the PhD will be held at ROBL at ESRF in Grenoble (France) where the student will use synchrotron techniques to characterize his samples.

The PhD student will be engaged in the following areas of research: synthesis of actinide systems; characterization by laboratory and synchrotron methods; data analysis. You will receive the support from team members for engineering, technical and software tasks.

Requirements:

- Master or Diploma in Physics / Chemistry / Material Science
- High motivation to work in an international team
- Interest in actinides systems or/and in synchrotron radiation techniques
- Fluency in English, good communication and (scientific) writing/reporting skills
- Mobility between Grenoble and Helsinki expected

If you have any questions, please contact Kristina Kvashnina, tel.: +33 476 88 23 67 kristina.kvashnina@esrf.fr or Damien Prieur, tel.: +33 476 88 24 63 damien.prieur@esrf.fr. Kindly submit your completed application (including cover letter and CV) to kristina.kvashnina@esrf.fr, damien.prieur@esrf.fr and rene.bes@helsinki.fi by **15th of March 2024**.

ROBL, University of Helsinki and University Grenoble Alpes are committed to equal opportunity employment and we strongly encourage applications from qualified female candidates. We also carefully consider all applications from candidates with severe disabilities.