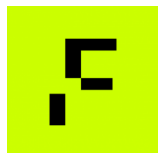


**Freie Universität Berlin - Fachbereich Biologie, Chemie, Pharmazie -
Institut für Chemie und Biochemie - Anorganische Chemie, AG
Radiochemie**



The Huittinen research group at the Institute of Chemistry and Biochemistry, Freie Universität Berlin, works in the fields of inorganic solid-state chemistry and radiochemistry. Our research focuses on molecular and solid-state compounds containing f-elements and technetium, with the aim of understanding how composition, oxidation state and local structure determine their chemical and physical properties. A major focus of our research is on materials for the nuclear fuel cycle and the safe disposal of radioactive waste. By combining the synthesis of novel materials with advanced structural and spectroscopic characterization techniques, we address both fundamental questions in chemistry and application-oriented challenges.

Research assistant (f/m/d) DM-881

with 75%-part-time job limited to 31.10.2029 salary grade (Entgeltgruppe) E13 TV-L FU
reference code: DM-881

City: Berlin; Starting date (earliest): At the earliest possible; Duration: befristet bis zum 31.10.2029; Remuneration: Entgeltgruppe 13 TV-L FU; Reference number: DM-881;
Closing date: 28/09/26

Tasks

The research assistant position (f/m/d) is part of the collaborative project ATLAS - Structural stability and integrity of spent nuclear fuel phases from interim storage to final disposal: Linking atomistic behaviour and technical aspects, funded by the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN) (subject to funding approval).

The project brings together researchers from Forschungszentrum Jülich, Helmholtz-Zentrum Dresden-Rossendorf, Freie Universität Berlin, Goethe University Frankfurt and RWTH Aachen University. The overall aim is to understand how radiation damage affects the long-term stability of spent nuclear fuel during extended interim storage. At Freie Universität Berlin, the project focuses on radiation-induced changes in oxide model materials relevant to spent nuclear fuel.

- Your tasks:
Synthesis of cerium-based oxide model materials (polycrystalline CeO₂ and CeO₂)

doped

with lanthanides and zirconium) by wet-chemical and solid-state methods, simulating the

elevated fission-product inventories of high-burnup nuclear fuel.

- Preparation of radionuclide-containing model compounds, in particular Pu-based perovskite phases, during research stays at partner institutes.
- Ion irradiation of model phases with Au and He ions to simulate recoil damage and helium accumulation in the materials, as well as long-term self-irradiation experiments on Pu-doped oxide phases.
- Structural, spectroscopic and microscopic characterization of pristine and irradiated materials using X-ray diffraction, Raman spectroscopy, electron microscopy, and X-ray absorption spectroscopy.
- Analysis of radiation-induced structural and chemical changes, including dose-response relationships and helium solubility behaviour.
- Evaluation and interpretation of experimental data in collaboration with modelling partners, providing input parameters for defect models and SCIANTIX simulations.
- Presentation of research results at international conferences and publication in peer-reviewed journals.
- Active participation in project meetings and collaborative research within the ATLAS consortium.

Requirements

Key Requirements

A completed university degree (M.Sc. or Diploma degree) in chemistry or related subjects.

Desirable

- A strong background in inorganic solid-state chemistry or radiochemistry.
- Experience with the synthesis and characterization of inorganic materials.
- Knowledge of diffraction and spectroscopic methods.
- Interest in actinide chemistry and radiation effects in materials.
- Willingness to handle open radioactive materials.
- Willingness to spend extended periods at collaborating research institutes in Germany.
- Willingness to participate in the radiation safety organization in the group.
- Good written and spoken English.
- Basic German language skills are desirable.
- Ability to work independently as well as in an interdisciplinary team.

Application

If you are interested in what we have to offer,

We look forward to receiving your application, which should include the following documents:

- A one-page letter of motivation with details of previous research experience.
- Your CV (including a list of publications if applicable).
- Copies of your Bachelor's and Master's degree certificates.

Simply submit your application exclusively via our career portal by clicking the "Apply now"

button. Unfortunately, we cannot consider applications by post or by e-mail.

You can also get in touch with Ms.Nina Huittinen (nina.huittinen@fu-berlin.de).

Freie Universität Berlin is an equal opportunity employer.

More information at <https://stellenticket.de/206845/BUA/>
Offer visible until 28/09/26

