Helmholtz-Zentrum Dresden-Rossendorf e.V.

With cutting-edge research in the fields of ENERGY, HEALTH and MATTER, around 1,500 employees from more than 70 nations at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) are committed to mastering the great challenges facing society today. The Institute of Resource Ecology performs research to protect humans and the environment from hazards caused by pollutants resulting from technical processes that produce energy and raw materials. The Department of Reactive Transport is looking for a

PhD Student (f/m/d) Tomography of desorption reactions: positron emission tomography for quantifying the remediation of contaminated materials.

In the first year, you will receive 50% of the TVöD salary. Depending on your work performance, your remuneration may increase to 75% in the second year and 100% in the third year. The position is subject to the approval of project funding, which is still pending.

City: Leipzig; Starting date (earliest): 01/10/25; Duration: 3 years; Remuneration: TVöD Bund; Reference number: 2025/103; Closing date: 31/08/25

Working field

- The advertised radioecology-oriented doctoral program is being carried out in a joint project with five partners. The focus of the doctoral program is the analysis of the spatial and temporal variability of decontamination efficiency in different soil materials on a flow cell scale. The results will be evaluated together with the results of large-scale experiments conducted by the partners.
- In cooperation with partners from the field of biochemistry, chemical parameters of decontamination will be optimized and quantified using tomographic methods, in particular positron emission tomography, with spatial and temporal resolution. Different types of substrates and contamination are being investigated with regard to decontamination efficiency.
- The analytical focus is on positron emission tomography, computed tomography, and autoradiography. A cyclotron and a radiochemistry laboratory are available on site for the development of suitable radiotracers.
- One focus of the work is on the use and evaluation of large tomographic data sets to derive parameter data for reactive transport modeling.
- The work is carried out in close cooperation with users from the nuclear waste management sector.

Requirements

- Completed university studies (Master/Diploma) in the field of Chemistry, Radiochemistry, Radioecology, Mineralogy, Geology or related field
- Experience in experimental and analytical work and in the evaluation of extensive

analytical data sets
- Knowledge of handling radioactive substances is desirable
- Experience with radiochemical methods is an advantage
- Highly qualified and highly motivated graduates and are interested in working in an interdisciplinary
- Excellent written and verbal communicaton skills in the English

What we offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- A structured PhD program with a comprehensive range of continuing education and networking opportunities - more information about the PhD program at the HZDR can be found here
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment, mobile working and flexible working hours
- Numerous company health management offerings
- Employee discounts with well-known providers via the platform Corporate Benefits
- An employer subsidy for the "Deutschland-Ticket Jobticket"

Application

We look forward to receiving your application documents (including cover letter, CV, diplomas/transcripts, etc.), which you can submit via our online-application-system: https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=75328

More information at https://stellenticket.de/196771/TUBS/
Offer visible until 30/08/25