

PhD student (f/m/d)

Institute of Geology and Mineralogy

The University of Cologne is one of the largest and most research-intensive universities in Germany, offering a wide range of subjects. With its six faculties and its interfaculty centres, it offers a broad spectrum of scientific disciplines and internationally outstanding profile areas, supported by the administration with its services.

The Mineralogy-Crystallography group at the Institute of Geology and Mineralogy uses experimental and computational methods to study the structure and properties of Earth materials. The PhD position is funded in the framework of the recently established DFG Priority Program „Dynamics of Ore Metals Enrichment - DOME“. The project aims for a better understanding of rare earth element speciation and transport in hydrothermal systems using first-principles molecular modeling approaches.

YOUR TASKS

- » first-principles molecular dynamics simulations of rare-earth element-bearing aqueous fluids
- » development and application of efficient interaction potentials for complex chemical systems, e.g. using neural networks
- » use of advanced sampling methods to derive thermodynamic properties of ore-forming fluids
- » presentation and publication of research results

YOUR PROFILE

- » MSc. In Geosciences, Chemistry, Physics or any related field
- » good knowledge in chemical thermodynamics, physical chemistry or condensed matter physics
- » skills in programming and/or molecular simulations
- » interest in interdisciplinary research including mineralogy and computational chemistry
- » good command of English language

WE OFFER YOU

- » dynamic and interdisciplinary research group
- » a diverse and fair working environment
- » support in reconciling work and family life
- » flexible working time models
- » extensive advanced training opportunities
- » occupational health management offers
- » local transport ticket at a discount for UoC employees

The position is available immediately on a part-time basis (75%) and has a limited duration of 36 months. If the applicant meets the relevant wage requirements and personal qualifications, the salary is based on remuneration group TV-L 13 of the pay scale for the German public sector.

The University of Cologne is committed to equal opportunities and diversity. Women are especially encouraged to apply and will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from people with disabilities / special needs or of equal status.

Please send your convincing application with proof of the sought qualifications by email (in one pdf-file) with the reference number wiss2009-22 to Prof. Sandro Jahn (s.jahn@uni-koeln.de).

The application deadline is 30.10.2020.