



Faculty of Mathematics and Natural Sciences

PhD position (f/m/x) in computational mineral physics

Institute of Geology and Mineralogy

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

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 (f/m/x) is funded in the framework of the recently established DFG Priority Program 'Reconstructing the Deep Dynamics of Planet Earth over Geologic Time (DeepDyn)'. The project aims for a better understanding of thermal transport across the core-mantle boundary.

YOUR TASKS

- » Systematic assessment of various molecular-scale simulation methods to predict the thermal conductivity of crystals
- » First-principles simulations of thermal transport properties of minerals at the Earth's lowermost mantle conditions
- » Development and application of advanced interaction potentials
- » Presentation and publication of research results

YOUR PROFILE

- » Master's degree in Geosciences, Physics, Materials Science, Chemistry or any related field
- » Good knowledge in condensed matter physics, physical and/or computational chemistry
- » Basic skills in programming and/or molecular simulations
- » Interest in interdisciplinary research including mineralogy, geophysics, computational materials science
- » Good command of the English language

WE OFFER

- » a dynamic and interdisciplinary research group
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » The opportunity to work remotely

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 Gender Equality Act of the State of North Rhine-Westphalia (LGG NRW). We also expressly welcome people with disabilities/special needs or of equal status.

The position is available from 01.01.2024 on a part-time basis (29,87 hours per week). The contract is limited to a duration of three years. If the applicant meets the relevant wage requirements and personal qualifications, the salary will be based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications without a photo under: <https://jobportal.uni-koeln.de>. The reference number is Wiss2308-08. The application deadline is 15.09.2023. For further inquiries, please contact Professor Sandro Jahn (s.jahn@uni-koeln.de).