

## PhD Position in Experimental Petrology at the Ruhr-University Bochum, Germany (TVL E13 75%)

### Position Summary

The Experimental Petrology and Geochemistry workgroup at the Ruhr-University of Bochum is inviting applications (m/f/x) for a 3-year DFG-funded PhD research project in experimental geosciences. The project aims to enhance our understanding of metal and sulfide melt mobility in the Earth's deeper mantle and how this process is connected to diamond formation. Specifically, the influence of different host lithologies, chemical compositions, and pressures will be investigated. The successful candidate will conduct high-pressure and high-temperature experiments using the multi-anvil apparatus, building upon established methodologies. Experimental data will be analyzed using advanced microanalytical techniques such as Focused Ion Beam Secondary Electron Microscopy (FIB-SEM) and sub-micron resolution computed tomography ( $\mu$ CT). Furthermore, laboratory-scale findings will be extrapolated to geological scales using reactive flow modeling and machine learning algorithms.

The Department of Geosciences at Ruhr-University Bochum boasts a comprehensive array of analytical and experimental facilities. For more details, visit our webpages: <https://www.gmg.ruhr-uni-bochum.de/index.php/en/arbeitsrichtungen/petrologie-und-geochemie> and <https://www.ruhr-uni-bochum.de/epma/index.html.en>. Additionally, we have access to the microanalytical facilities of the Center for Interface-Dominated High Performance Materials (<https://zgh.rub.de/core-facilities>), conveniently located on campus.

### Requirements

Master's degree or equivalent in Earth sciences, physics, or chemistry.

### Your Profile

- Proficiency in both written and spoken English.
- Strong background in quantitative analysis.
- Willingness to independently operate experimental and analytical devices following comprehensive hands-on training.

### Additional Skills

- Practical experience with experimental devices such as multi-anvil, piston-cylinder, or diamond-anvil cell.
- Proficiency in programming/scripting languages such as Python, R, C, C++, and/or Matlab.
- Familiarity with quantitative image analysis in 2D and/or 3D using software like Avizo, Dragonfly, ImageJ, etc.
- Other advantageous skills include knowledge of LaTeX, Excel, and data visualization and plotting tools (e.g., Igor, Matlab, Python, Origin, etc.).

## **Terms of Employment**

The position is 75% TV-L E13. (~ 2000 € per month after taxes).

## **Application Process**

Interested candidates should send their CV to **raul.fonseca@rub.de** or **christopher.c.beyer@rub.de**, along with a one-page motivation letter, latest transcript of records, and contact details of at least one referee who can provide a recommendation letter.

The position will remain open until filled.

## **About the RUB**

The Ruhr-Universität Bochum is one of Germany's leading research universities, addressing the whole range of academic disciplines. A highly dynamic setting enables researchers and students to work across the traditional boundaries of academic subjects and faculties. To create knowledge networks within and beyond the university is RUB's declared aim.

The Ruhr-Universität Bochum stands for diversity and equal opportunities. For this reason, we favor a working environment composed of heterogeneous teams, and seek to promote the careers of individuals who are underrepresented in our respective professional areas. The Ruhr-Universität Bochum expressly requests job applications from women. In areas in which they are underrepresented they will be given preference in the case of equivalent qualifications with male candidates. Applications from individuals with disabilities are most welcome.