

The Petrology and Fluid Processes research group at RWTH Aachen University invites applications for a fixed-term position as

PhD student / Research assistant (m/f/d)
TV-L E13, 75%, 3 years

in the DFG-funded project “The relationship between light (F, Cl) and heavy halogens (Br, I) during the magmatic-hydrothermal transition in silicic magmatic systems”.

Research activities in the Petrology and Fluid Processes group focus on the role of water and other volatiles in highly evolved magmatic systems to investigate magma storage conditions, the exsolution and transport of fluids, and the formation of associated mineral resources. This project focuses on the contrasting fractionation behavior between heavy and light halogens during differentiation of silicic magmas, in order to better assess their suitability as geochemical tracers for crustal fluid sources. The project will be conducted in close collaboration with Dr. Tobias Fusswinkel and Prof. Thomas Wagner at the partner Institute of Applied Mineralogy and Economic Geology at RWTH Aachen, as well as partners at the University of Hannover and collaborators in Namibia and Scotland.

Your tasks

- Perform high-pressure high-temperature experiments to synthesize halogen-bearing glasses as reference materials for LA-ICPMS analysis, and investigate the effect of F on the water-saturated granitic solidus
- Characterize halogen concentrations in minerals and fluid inclusions in a zoned pegmatite system in Namibia, via EPMA and LA-ICPMS
- Present research results at scientific meetings and via publications in international peer-reviewed journals

Your profile

We are looking for a highly motivated individual with a keen interest in analytical work and the ability to drive this project forward independently. Potential candidates should hold a university degree (MSc or equivalent) in Earth sciences or a related field with a strong background in petrology and geochemistry. They should have an excellent level of written and spoken English. Prior experience with in situ geochemical analysis (EPMA, LA-ICPMS), fluid inclusion thermometry and/or experimental petrology (piston cylinder, coldseal) is of great advantage. The project offers research in a young group and exciting international environment, as well as training in state-of-the-art analytical and experimental techniques.

Application procedure

The position is fully funded for 3 years, with a possible starting date between December 2025 and February 2026. This is a part-time position (75% of the standard weekly hours for full-time employment). The salary is based on the German public service salary scale (TV-L). RWTH Aachen University is certified as a "Family-Friendly University". We particularly welcome and encourage applications from women, disabled persons and ethnic minority groups, recognizing they are underrepresented across RWTH Aachen University. The principles of fair and open competition apply and appointments will be made based on experience and merit.

To apply, candidates should submit a short statement of their research experience and interests, a CV including a list of publications (if applicable), copies of their university degree records and certificates, and the names and contact information of two potential referees. Application deadline is **September 21st, 2025**.

Please send your application materials in a single pdf to Prof. Juliana Troch at juliana.troch@pfp.rwth-aachen.de. Please note that communication via unencrypted email is potentially vulnerable to unauthorized access by third parties. For further information on the project, please contact us via email under the same contact information.