



Postdoctoral Researcher – Chemistry of Hydrothermal Magnetites (f/m/d) | Full-time | Innsbruck (and Vienna)

Working for our future!

GeoSphere Austria is the national geological, meteorological, climatological and geophysical service in Austria. We combine over 150 years of experience and competence in cutting-edge research always putting the needs of people first in all our endeavors. With more than 500 experts, we are the knowledge partner on topics including geology and raw materials, geophysics, weather and climate, natural hazards and more.

Your role

You will work on the project "*Chemistry of hydrothermal magnetite*", funded by the Austrian Science Fund (FWF). The project aims to develop a deeper understanding of trace element partitioning in magnetites formed from high-temperature, saline, ore-forming fluids. Datasets of partition coefficients will be obtained from experimentally grown magnetites, natural ore samples, and thermodynamic modeling, and will be compared to each other. Observations and data generated in this project will form the basis for interpreting the formation of magnetite-rich ores based on mineral chemistry.

Your tasks

- Design and conduct a series of experiments in the hydrothermal laboratory at the University of Innsbruck to grow magnetite from trace-element-doped solutions under controlled P/T/X conditions.
- Sample natural ore specimens from research collections for comparison.
- Perform petrographic analyses on synthetic and natural samples, followed by mineral chemical analyses at the nanoscale using SEM, EPMA, TEM, and LA-ICP-MS.
- Characterize mineralizing fluids in inclusions within cogenetic phases using microthermometry, Raman spectroscopy, and LA-ICP-MS.
- Conduct in-situ oxygen isotope thermometry with the ion microprobe and (time permitting) analyze the oxidation states of Fe and trace elements in magnetite using TEM-ELNES and μ XANES.

International experts will support you throughout all stages of sampling, experimentation, and analysis. You will interact with colleagues at the University of Innsbruck and GeoSphere Austria, be willing to supervise project-related bachelor's or master's students, and present your findings at scientific conferences and in peer-reviewed journals.

Your Qualifications

- Unrestricted access to the Austrian labour market with a valid work permit
- Completed Master's degree (or equivalent) and PhD in one of the following disciplines: geochemistry, petrology, mineralogy, or economic geology
- Very good command of English



Your desired qualifications

- In-depth knowledge in experimental petrology, mineral chemistry, fluid inclusions, or geochemical modeling of fluid-rock interaction
- Familiarity with the formation of hydrothermal/magmatic ore deposits
- Experience with thermodynamic modeling methods
- Proven record of publishing research results in peer-reviewed journals
- High flexibility and willingness to travel
- Ability to work independently
- Good communication skills
- Experience supervising BSc or MSc students
- German language skills or willingness to learn

Your benefits with us

- **Annual gross salary: starting at €52.024** initial salary may be higher based on applicable qualification and/or relevant experience
- **Paid lunch break:** 30 minutes
- **Additional leave:** A 6th week of vacation starting from the age of 43
- **Perks:** Pluxee vouchers, on-site cafeteria
- **Work model:** Flexible working hours (flextime and home office options)
- **Social impact:** Family-friendly working environment
- **Modern office:** Ergonomic workstations
- **Varied responsibilities:** Diverse and independent tasks
- **Room for growth:** Opportunity to actively shape processes and make an impact
- **Job security:** Work in a successful and crisis-proof organization making an important contribution to our future

Employment duration

Fixed term of 2 years, with a possible extension of up to 6 months depending on funding. The first month of employment is considered a probationary period.

Start of employment

October/November 2025

Place of work

Initially at the University of Innsbruck, Institute of Mineralogy, Innrain 52, 6020 Innsbruck. Upon completion of the experimental program, approximately after one year, a transfer to GeoSphere Austria, Neulinggasse 38, 1030 Vienna, is possible.

Further information

Thomas Angerer, Head of the Mineral Resources Geology Unit (thomas.angerer@geosphere.at)

Application

Please send your application by **September 14, 2025**, quoting reference **521/24_114**, via email to both the project lead **Thomas Angerer** (thomas.angerer@geosphere.at) and the recruitment team at



GeoSphere Austria (bewerbung@geosphere.at). Include the following documents with your application:

- Cover letter
- Curriculum vitae
- Relevant certificates
- Publication list
- Letters of reference and/or contact details of two referees

Join our team and help shape the future with us! We look forward to receiving your application!

We value diversity and therefore welcome all applications – regardless of gender, nationality, ethnic or social origin, religion or belief, disability, age, sexual orientation, or identity. By submitting your application, you explicitly consent to the processing of your personal data.

You will be notified of an invitation to a personal interview by e-mail. Please note that any expenses related to your application (e.g., travel costs) cannot be reimbursed.

Your application documents will be stored in accordance with the European General Data Protection Regulation (GDPR) for the duration of the recruitment process and up to a maximum of 7 months after its completion. After this period, your data will be automatically and permanently deleted unless you have explicitly given us your consent for longer storage for consideration in future job postings.