



The Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences is the national centre for geosphere research. As a member of the [Helmholtz Association of German Research Centres](#) we are part of the largest scientific organization in Germany. With approximately 1,500 employees our key mission is to secure a profound understanding of the systems and processes of solid Earth, to develop strategies and options for action in addressing global change and its impacts on a regional level, to understand natural hazards and to minimize associated risks, to ensure the sustainable provision of energy and raw materials for a high-tech society and to evaluate the influence of human activity on system Earth. To complement the [Interface-Geochemistry](#) team, we are looking for a PhD student (f_m_x) to carry out research with a focus on mineral formation and transformation reactions.

PhD Fellow in Environmental (Bio)Geochemistry (f_m_x)

Reference Number 8243

We seek a highly motivated environmental mineralogist / biogeochemist who wants to develop her/his/their skills in a highly interdisciplinary and international work environment led by [Liane G. Benning](#), who is very committed to fostering a fully inclusive research environment. Non-discrimination and equal treatment are integral parts of our group policy.

The research will focus on laboratory experiments related to the formation of iron-phosphate / iron carbonate phases and their interactions with organic matter and the elucidation of the kinetics and mechanisms controlling their formation and stability. This knowledge will help us better understand modern and ancient biogeochemical cycles.

You will be trained in the use of *in situ* and time-resolved solution and solid phase synthesis / characterization methods to follow the formation and transformation of mineral phases and associated organic matter species. Methods will include mass spectrometry, UV-VIS, FTIR, DLS, and scattering/diffraction complemented by electron and X-ray micro-spectroscopic methods available in the group (e.g., [PISA](#)) or at synchrotron facilities around the world.

The successful candidate (f_m_x) will work closely with other students and postdocs in the group and be registered in the PhD programme of the Freie Universität Berlin.

Your responsibilities:

- Perform *in situ* and time resolved experiments to quantify the kinetics and pathways of the formation / transformation of iron phosphate/ iron carbonate phases in the presence and absence of organic compounds
- Obtain a holistic understanding of mineral-organic matter-interactions under simulated Earth Surface conditions.
- Determine the solution and solid phase changes in structure, composition and sizes of species and phases during these reactions
- Evaluate how organic compounds interact with and/or affect the stability of phases in the Fe-C / Fe-P systems
- Publish in international peer-reviewed journals
- Present research results at scientific meetings
- Participate in outreach activities

Your qualifications:

- MSc degree (or equivalent) in mineralogy, environmental sciences, materials or inorganic chemistry
- Strong mineralogical / crystal chemical or interface biogeochemical knowledge base
- Documented experience in the use of at least some characterization techniques (e.g., XRD, SEM/TEM, FTIR, UV-Vis, ICP-OES, IC)
- Experience in mineral synthesis and chemical analyses is an asset
- High motivation and creativity geared towards result-oriented, structured and independent results
- Capacity for interdisciplinary and international team-work and excellent communication skills
- Proficiency in spoken and written English

What we offer:

- Ambitious and varied tasks in a dynamic and international research environment
- State-of-the-art equipment
- Public service benefits
- Extensive training opportunities
- Professional career advice offered by our in-house Career-Centre
- Flexible working hours and conditions
- Support with finding a good work-life balance offered by [benefit@work](#)
- Institute day-care centre on site
- Working at the Albert Einstein science park on the Telegrafenberg in Potsdam
- Work place within walking distance of Potsdam main train station, or just a short ride on the shuttle bus

Start date: As soon as possible

Fixed-term: 3 years

Salary: The position is classed as salary group 13 according to "TVöD Bund (Tarifgebiet Ost)". The salary group is determined on the basis of the Collective Wage Agreement and the respective personal qualifications.

Working hours: Part-time 75% (currently 29.25 h/week)

Place of work: Potsdam

Have we piqued your interest?

If so, we are looking forward to receiving your application by **21st September 2023**. Applications are only accepted if submitted through the **online form** via the **APPLY** button below and if they contain the following documents:

1. **Cover letter** detailing your fit to the qualifications and responsibilities detailed above.
2. your **detailed CV** that should include names and contact details for 2 scientific referees.

[Apply](#)

Diversity and equal opportunities are integral components of our human resources policy. The GFZ actively promotes diversity and explicitly welcomes applications from all qualified individuals, regardless of ethnic and social origin, nationality, gender, sexual orientation and identity, religion/belief, age and physical characteristics. Anyone who has been recognized as severely disabled, will be given preferential consideration in the event of equal suitability and qualification in accordance with the provisions of the German Social Code IX. If you have any questions, please contact our representative for the severely disabled at [sbv\[at\]gfz-potsdam.de](mailto:sbv[at]gfz-potsdam.de), who will be happy to assist you in the further application process. In case of further queries regarding gender equality, please do not hesitate to contact our Equal Opportunities Officer at [gba\[at\]gfz-potsdam.de](mailto:gba[at]gfz-potsdam.de).

Your personal data will be processed for the purpose of conducting the selection procedure on the basis of Art. 6 para. 1 b, Art. 88 GDPR in conjunction with Art. 26 of the Data Protection Act for the State of Brandenburg. After completion of the procedure, application documents will be deleted in compliance with data protection regulations.

In case of any further queries relating to the field of activity, please contact Liane G. Benning via email at benning@gfz-potsdam.de. If you have any general questions about the application process, please contact our recruiting team at our phone number +49 (0) 331-6264-28787.