

PhD position on water-limited mineral weathering and CO₂ removal

The Environmental Geochemistry group at the Institute of Geological Sciences, University of Bern, Switzerland invites applications for a PhD position in mechanisms of mineral weathering in the context of climate change. We are seeking a PhD student to participate in the [SERI-funded ERC starting grant, DryCO₂](#). The DryCO₂ project explores mechanisms of mineral weathering and in particular the impacts of water and reactive gas availability on weathering rates. The project will explore how climate change influences weathering rates and the feedback between mineral weathering and removal of CO₂ from the atmosphere in natural and engineered systems. The PhD student will conduct experimental studies in the laboratory, including development of novel experimental protocols, conduct a variety of analyses (e.g., mineralogical characterization, stable isotopes, aqueous concentrations, electron microscopy), and work closely with the other members of the DryCO₂ team.

Requirements

We are interested in candidates with a Master of Science in Geology, Physical Geography, Environmental Chemistry, or a related field. The project will involve designing and conducting experiments, analyzing fluids and solids with a variety of techniques (e.g., ICP-MS, X-ray diffraction, scanning and transmission electron microscopy), geochemical modeling, and isotopic analyses. Experience with these techniques is an advantage. Strong written and verbal communication skills in English are required. Experience or strong interest in aqueous geochemistry, wet chemistry laboratory work, and analytical laboratory work are beneficial. The candidate must be willing to collaborate with other team members in the Environmental Geochemistry group and international collaborators, communicate effectively, think critically, and contribute to the DryCO₂ project as a whole.

Offer

We offer a fully funded PhD position for four years on the SERI-funded ERC starting grant, DryCO₂ (this is the second of two PhD positions on this project, in addition to a Post Doc, thus you will join a team). The Institute of Geological Sciences, University of Bern hosts state-of-the-art laboratory and analytical facilities. There will be numerous collaboration opportunities within University of Bern and with international colleagues. In the Environmental Geochemistry group, we aim to foster a supportive, dynamic, diverse, and inclusive team and students from historically underrepresented groups in the Natural Sciences fields are encouraged to apply.

Application procedure

To apply: Submit a Curriculum vitae, motivation letter with a description of your research interests and skills (maximum 2 pages), and contact information for 2 referees by email to Prof Anna Harrison (anna.harrison@geo.unibe.ch).

Deadline: Assessment of applications will begin on 1 Oct and continue until a suitable candidate is found. Preferred state date by January 2024.