



Institut für Geologie, Baltzerstrasse 1 + 3, CH-3012 Bern

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**UNIVERSITÄT
BERN**

Institut für Geologie

PhD student position in Metamorphic Petrology and Geochemistry: Petrochronology of fluid-rock interactions in subduction zones

The computational petrology and geochemistry group hosted at the Institute of Geological Sciences, University of Bern is seeking a PhD student to contribute to the development of new analytical techniques and numerical tools for the investigation of fluid-rock interaction processes and element mobility in subduction zones.

The open position is fully funded for 36-48 months, within the framework of the Horizon 2020 ERC StG project [PROMOTING](#). The PhD candidate is expected to develop a strong multidisciplinary profile including both analytical petrology and numerical modeling skills.

There are two main objectives of this PhD project. (1) The development of a technique for the exploration of element repartition in 3D by integrating computerized tomography (CT) scan and electron probe micro-analyzer (EPMA). (2) The development of a general framework to model multi-rock systems including phase equilibria and isotope fractionation models. These new tools will be combined with in-situ geochronology and applied to different rock types in high-pressure and ultra-high pressure terranes throughout the Western Alps. The aim of this work is to deepen our understanding on the magnitude and tempo of fluid-rock interaction processes in subduction zones.

We are seeking a motivated student with existing skills in scientific programming (e.g., Matlab, Python) and, if possible, in petrological modeling (Theriak-Domino, Perple_X). Experience with fieldwork and/or analytical skills (SEM, EPMA, CT-scanner) will be an advantage.

Interested candidates should send their inquiries and applications, including a cover letter (max. 1 page stating the research motivation and interests), a detailed CV (including academic background, previous research/publications and/or industrial experience as well as the names and contact information of 2-3 referees) to Prof. Pierre Lanari (pierre.lanari@geo.unibe.ch) before 29th of May 2020.