

## **PhD position in magmatic-hydrothermal geochemistry**

Applications are invited for a PhD position that aims at quantifying the element distribution and Mo isotope fractionation between residual melt and exsolving hydrothermal fluids employing miarolitic cavity samples from subvolcanic intrusions. Focus is on the Torres del Paine igneous system, Patagonia, that documents - at excellent outcrop conditions - diverse features of fluid saturation. Central will be the analysis of fluid and melt inclusions, and minerals, employing laser-ablation ICP-MS, electron probe and possibly ion probe, and Mo isotope ratio determination uses MC-ICP-MS techniques. The data set of element distribution coefficients and isotope ratio fractionation factors will greatly improve our understanding on element enrichment processes at the magmatic-hydrothermal transition and shall provide a comprehensive assessment on redox-sensitive, heavy stable isotope fractionation processes at these hot temperatures. Such data are fundamental for better constraining how magmatic volatiles transport chemical components and isotopic signals between magmatic and hydrothermal environments.

We seek a person with strong interest in petrology/hydrothermal geochemistry and analytical methods.

An MSc in Earth Sciences and good communication skills in English are prerequisites. Experience with field work in rugged mountain terrains and fluid and melt inclusions is desirable.

The Institute of Geological Sciences houses an electron probe (JEOL JXA8200), LA-ICP-MS, MC-ICPMS, TIMS, SEM-EDS and RAMAN, besides basic infrastructure. In-house research groups include those investigating rock-water interaction, metamorphic petrology and isotope geochemistry.

Visit the institute at <http://www.geo.unibe.ch/english/index.htm>.

The position is fully funded for three years, including benefits for social security.

This PhD project forms part of a large, long-term research project in collaboration with the University of Lausanne (Switzerland).

Applications should include a CV with details about research experience, educational and personal motivation to conduct this PhD project, abstract and graduation date (or planned date) of MSc thesis, and address of at least three referees who have agreed to provide references if requested.

Send only complete applications as one pdf file, preferably by e-mail.

Evaluation of applications will start on November 1st, 2014, and continue until filled.

The project starting date should be January, 2015.

Contact and further information (preferably by e-mail):

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