

Bayerisches Geoinstitut

We are looking to fill a PhD position in experimental petrology and geochemistry within the research program "*Fractionation of sulfur, copper and gold in two-phase fluids*", funded by the German Science Foundation.

The applicant must have a masters or diploma degree in one of the fields of petrology/mineralogy/geochemistry/economic geology.

The position is initially for two years, with the possibility for extension to three years. Salary is according to the German civil service remuneration system E13/2 (i.e., 50% of E13).

The aim of this project is to experimentally investigate a phenomenon observed on natural fluid inclusions from various ore deposits. Analyses of coexisting vapor and brine inclusions have shown that copper and gold occur at higher concentrations in the vapor, in marked contrast to most other ore-forming metals which fractionated into the coexisting brine. The fact that copper and gold can be efficiently transported by the vapor phase has important implications for the formation of porphyry Cu-Mo-Au deposits and epithermal gold deposits. In this study we will trap aliquots of vapor and brine at elevated pressure and temperature in form of synthetic fluid inclusions in quartz, and subsequently analyze them by Laser-ablation ICP-MS and other microanalytical techniques.

Applicants should have a solid education in petrology and geochemistry, and demonstrate their ability to perform laboratory-based research. Basic knowledge in thermodynamics and economic geology is desirable.

Enquiries and applications should be sent to Dr. Andreas Audétat (andreas.audetat@uni-bayreuth.de), including a CV and a full list of classes taken (with grades). Information about the Bayerisches Geoinstitut can be found at <http://www.bgi.uni-bayreuth.de/>. Evaluation starts immediately and will continue until the position is filled.

Andreas Audétat

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