

PhD Position in Petrology at the ETH Zurich

We are pleased to advertise a PhD project described below. The project is fully funded within the ETH grant "Multi-component chemical zoning in minerals under externally imposed pressure variation". Further enquiries about the position as well as applications should be addressed directly to Hans Vrijmoed (johannes.vrijmoed@erdw.ethz.ch).

The application should contain a cover letter with your motivation and CV (containing a complete overview of education, supervised professional training and professional work) + publications (if applicable). Please send the application only via email indicated above.

Qualified individuals need to have a MSc-degree in Geosciences at the time of appointment. The appointment will be for a period of 3 years and is available from April 2014. The advertisement remains open until the position is filled.

The successful candidate will undertake a fieldwork and petrography based study focused on understanding the effect of pressure variations on multi-component chemical zoning in minerals (mainly garnet) in metamorphic rocks. The work will comprise: (1) Fieldwork (Western Gneiss Region, Norway and Bohemian Massif, Czech Republic) and petrographic analyses using conventional analytical methods. (2) Application of the newest geobarometric methods designed for systems under pressure variation (3) Numerical simulations constrained by the observations and collected data. Through numerical simulations the effect of pressure on the observations will be described. The aim of the research is to provide insight into the role of mechanically maintained pressure variations on multi-component chemical zoning in garnet from high temperature metamorphic rocks.

We are seeking a highly motivated candidate with field-oriented background in geology and metamorphic petrology. Preference will be given to a candidate with documented previous experience in thermodynamic and/or numerical modelling or to a candidate who shows his/her motivation to learn it. Good knowledge of math, physics and chemistry is an advantage.

As a PhD candidate you will be working with a team of world-class researchers at the ETH Zurich as well as will work in close collaboration with the University of Lausanne (UNIL).