Postdoc Position at the University of Bern,
Institute of Geological Sciences

Topic: Contribution to Horizon 2020-EURAD-ACED. Chemical evolution at the steel/clay interface

Our Rock-Water Interaction (RWI) group (www.geo.unibe.ch/research/rockwater_interaction) at the University of Bern has built up expertise in the geochemistry of natural and engineered clay materials in the last 25 years. A major effort is put on the study of interfaces and transport phenomena between clay and other components, such as cement and iron, which may occur in geological repositories for radioactive waste, but also in other deep-seated applications, such as geothermal energy or CO₂ sequestration. We apply a number of microscopic, spectroscopic, microstructural and wet chemistry techniques to characterise both the solid and the aqueous phases. We combine these experimental data with multicomponent reactive transport modelling using various state-of-the-art codes (PFLOTRAN, TOUGHREACT, PHREEQC, CRUNCHFLOW).

We are looking for a postdoctoral fellow for a 2 year project within the EU programme Horizon 2020 with possibility for extension.

Start: December 2019 or January 2020

Your tasks:
✓ Development of a reactive transport model for corrosion and Fe(II)-clay interaction in the context of geological disposal of radioactive waste
✓ Support and interpretation of Fe(II)-clay interaction experiment
✓ Documentation of work in reports and scientific journals
✓ Collaboration with various partners, such as the Swiss National Cooperative of the Disposal of Radioactive Waste (NAGRA) and international partners from EURAD

Your profile:
✓ PhD in aqueous geochemistry, clay chemistry or related field
✓ Knowledge on geochemical modelling & transport
✓ Preferably, experience with modelling of redox processes
✓ Experimental skills
✓ Good scientific English writing
✓ Open-minded, capable of working in international and multi-disciplinary team

We offer:
✓ Qualified personnel and technical support
✓ Participation in innovative research project within Horizon 2020
✓ International network
✓ Attractive financial conditions

For further information please contact:
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