



Two PhD positions in Hydrothermal Geochemistry of Rare Earth Elements

We seek motivated candidates with a strong interest in hydrothermal geochemistry and ore-forming processes for two funded PhD projects (3 years) at the Department of Earth and Environmental Science (<https://nmt.edu/academics/ees/>) and the New Mexico Bureau of Geology and Mineral Resources (<https://geoinfo.nmt.edu/>) at New Mexico Tech. These positions are part of an U.S. Department of Energy (DOE) funded project in Dr. Alexander Gysi's [Ore Deposits and Critical Minerals research group](#).

The successful candidates will perform experiments in the Ore Deposits and Critical Minerals Experimental Laboratory with a focus on the study of the speciation of REE in hydrothermal aqueous fluids. The experimental part of this research involves high temperature potentiometric, UV-Vis, and calorimetric experiments. This project also involves collaborative work on the [MINES thermodynamic database](#) and the development of internally consistent thermodynamic databases using modern computational optimization techniques.

Prospective PhD students are expected to have a MSc degree in geochemistry or earth science related fields and an interest in thermodynamics, laboratory experiments, analytical geochemistry, and numerical modeling. Hands-on experience with solution ICP-MS and mineral analysis techniques such as XRD and SEM are beneficial. Proficiency in English is required. The PhD positions are funded for a period of three years through research assistantships that cover stipend and tuitions to study at NMT, research costs and attendance to conferences for networking opportunities.

For additional questions about the project and intend to apply please email alexander.gysi@nmt.edu with your CV and a short cover letter. The letter should explain your previous research experience, career goals, and your interest in this position. Applications will be reviewed starting 12/1/2020 until positions are filled.

Prospective candidates will be further invited to submit their full application directly to the Office of Graduate Programs at NMT using the following link: <http://gradcas.liasoncas.org/apply/>. Applicants are expected to submit a CV, academic transcripts, a letter of introduction and obtain three reference letters. A TOEFL is required for non-native English speakers. For questions about the admission process at New Mexico Tech please contact graduate@nmt.edu. The deadline for Fall 2021 applications is January 15, 2021.