Posted: <u>October 7, 2021</u>

NEW MEXICO TECH
SCIENCE · ENGINEERING · RESEARCH UNIVERSITY

POSITION ANNOUNCEMENT

TITLE: <u>POSTDOCTORAL FELLOW IN COMPUTATIONAL GEOCHEMISTRY</u>
DEPT: <u>BUREAU OF GEOLOGY</u>

REG ☐   **TEMP** ☑   **FULL TIME** ☑   **PART TIME** ☐

STARTING RATE or SALARY RANGE <u>$50,000</u>
Employees being promoted to a higher classified position receive the minimum for the position or a pay rate adjustment of 8% whichever is greater.
All regular positions also entitle the employee to several benefits including health, dental, vision, life insurance, and retirement which is largely paid by New Mexico Tech for the employee and dependents.
INTERNAL POSTING THROUGH: <u>Concurrent</u>* CONSIDERATION WILL BE GIVEN FIRST TO TEMPORARY AND REGULAR TECH EMPLOYEES WHO APPLY WITHIN THE 7 DAY INTERNAL POSTING. APPLICATIONS RECEIVED AFTER THE 7 DAY POSTING MARGIN WILL BE CONSIDERED WITH OTHER OUTSIDE APPLICANTS.

JOB DUTIES:

The Postdoctoral Fellow will conduct ab initio molecular dynamic (MD) simulations to determine the speciation of REE in high temperature supercritical fluids. This work includes the use of high performance computing facilities at LANL in close collaboration with Dr. Dub. This Postdoctoral Fellowship has the option to include hydrothermal laboratory experimental work using X-ray absorption spectroscopic (XAS) techniques combined with hydrothermal diamond anvil cells (HDAC), and apply for beamline time and travel to the GSECARS facility in Chicago for XAS-HDAC experiments. The Postdoctoral Fellow will also be writing research publications for peer-reviewed journals and present at conferences. This position is hosted at New Mexico Tech with Alexander Gysi as supervisor, but includes collaborations with our partners in the new U.S. geoscience critical minerals experimental – thermodynamic research hub between New Mexico Tech (NMT), Los Alamos National Laboratory (LANL), and Indiana University Bloomington (IUB). As such, the Postdoctoral Fellow will be expected to travel yearly with up to 5 months internships at LANL.

REQUIRED QUALIFICATIONS:

Ph.D. or other doctorate level equivalent. - Area of study: Geochemistry/Chemistry/Geosciences/ Computer science. Molecular simulations and thermodynamic modeling required. coding of python and/or C++ required.X-ray absorption (XAS) spectroscopy and hydrothermal diamond anvil cell (HDAC) desired. UV-Vis and/or Raman spectroscopy desired. Writing of peer-reviewed articles (first-authored publications) required.

Apply to: nmtjobapps@npe.nmt.edu OR NMT/ HR 801 Leroy Place Brown Hall Box 190, Socorro, NM 87801