Opportunity Title: Postdoctoral Research Associate in Geochemistry
Opportunity Reference Code: ORNL11-24-CSD

Organization Oak Ridge National Laboratory (ORNL)

Reference Code ORNL11-24-CSD

Description The Geochemistry and Interfacial Sciences (GIS) Group at Oak Ridge National Laboratory (ORNL), http://www.ornl.gov/sci/csd/Research_areas/gis_group.html. has two postdoctoral positions available immediately. We seek candidates with broad geochemical understanding, flexibility, and experience with experimental systems, particularly at elevated temperatures and pressures. The Geochemist/Mineralogist position is associated with Dr. Lawrence M. Anovitz's studies of mineral synthesis and the physicochemical aspects of geologic fluid interactions with minerals, rock matrices and synthetic porous media. The Hydrothermal Geochemist position relates to research lead by Drs. David J. Wesolowski and Andrew G. Stack, involving aqueous speciation and mineral solubilities, surface charging, ion adsorption, and dissolution/precipitation kinetics. Both activities are focused on improving our ability to link geochemical processes operating over atomic, nanometer, pore and larger time-length scales in order to improve prediction and performance assessment of subsurface contaminant storage and migration, carbon sequestration and energy resource utilization.

Research Environment: The GIS Group functions as a team, with strong emphasis on the integration of experiments with atomic- to nano- to pore-scale probes of fluid and fluid-solid interfacial properties, including X-ray and neutron scattering, various spectroscopies and microscopies, and multiscale molecular modeling. The Group has developed a wide array of unique hydrothermal experimental facilities and expertise. ORNL researchers have extensive access to the world's most intense reactor-based and spallation neutron sources and leadership-class high performance computing platforms. ORNL's High Temperature Materials Laboratory and Center for Nanophase Materials Science offer unprecedented access to advanced electron and scanning probe microscopies and nanomaterials synthesis and characterization facilities.

Qualifications Candidates must have received a PhD degree in Earth & Geoscience, Chemistry,or other physical science, within the last 5 years. The ideal candidates will be experimentalists with good analytical, mathematical and computational skills and a willingness to take on and master new techniques. For the Geochemist/Mineralogist position, experience with cold-seal and internally-heated pressure systems, high temperature furnaces and mineral characterization techniques such as XRD, SEM/TEM, etc., is desirable. For the Hydrothermal Geochemist position, experience with hydrothermal systems, AFM and other surface characterization methods, and aqueous solution analytical techniques is desirable. Candidates must be self-starters, able to work independently, and willing to participate creatively in a collaborative team effort. Excellent oral and written communication skills in English are required. Active participation in scientific conferences and timely publication of results in peer-reviewed journals is expected.

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Applicants cannot have received the most recent degree more than five years prior to the date of application and must complete all degree requirements before starting their appointment.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Earth and Geosciences** (21 👁)
  - **Environmental and Marine Sciences** (2 👁)

Affirmation I certify that I have completed coursework towards a degree in science, technology, engineering, mathematics, or a related field.