Opportunity Title: Synchrotron Geochemist (PhD)
Opportunity Reference Code: NETL-2016-10-6-Lopano

Organization National Energy Technology Laboratory (NETL)

Reference Code NETL-2016-10-6-Lopano

Application Deadline 6/8/2017 12:00:00 AM Eastern Time Zone

Description **TITLE:** Synchrotron geochemist

DEPARTMENT: U.S. Department of Energy

AGENCY: National Energy Technology Laboratory (NETL)

LEVEL: Post-Doctoral

POSITION INFORMATION: 1 year appointment, Full-Time (40 hours per week), with opportunity for renewal.

DUTY LOCATION: Pittsburgh, PA

WHO MAY BE CONSIDERED: United States Citizens, LPRs, & Foreign Nationals with appropriate approval which includes F-1 OPT with EAD (STEM extension not valid), J-1 Exchange Visitor, and LPR with EAD

SUMMARY:

Through the Oak Ridge Institute for Science and Education (ORISE) this posting seeks motivated, post-graduates (PhD) interested in performing research as part of the Biogeochemistry and Water Team (B&W) within the Geologic and Environmental Sciences Directorate at NETL. NETL is a multi-disciplinary, scientific and technical-oriented U.S. Department of Energy National Laboratory. NETL's Research and Innovation Center (R&IC) conducts research to evaluate environmental impacts and risk assessments associated with domestic energy resource development.

The Geological and Environmental Systems (GES) directorate within R&IC is seeking researchers to conduct trace/heavy metal distribution and speciation studies that would utilize experimental laboratory techniques and synchrotron technologies (including but not limited to: micro-X-ray near-edge spectroscopy (XANES), micro-X-ray fluorescence (XRF) and extended X-ray adsorption spectroscopy (EXAFS)). These capabilities will be applied to a number of work plans within the GES area at NETL, from investigating rare earth element (REE) occurrences in unconventional resources and coal-related materials and byproducts, to studying heavy metal fate and transport in geological systems for carbon dioxide storage and for shale gas utilization and impacts.

This research supports the geomaterials characterization capabilities within the B&W team. Applicants for this position must have a background in geochemistry, environmental chemistry, and materials characterization. Laboratory experience studying leaching and characterization are desired. Applicants should also have a strong characterization background, including but not limited to: X-ray diffraction (XRD), Scanning Electron Microscopy (SEM), and Synchrotron X-ray spectroscopy and imaging technologies. Experience writing proposals for and conducting analyses at

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synchrotron facilities is also requested. Familiarity with quantitative XRF data analysis, XANES speciation analysis and EXAFS coordination analysis is beneficial. Synchrotron experience with environmental and natural samples is preferred, and experience with other synchrotron applications is also encouraged.

HOW TO APPLY:

Applicants should apply through the Oak Ridge Institute for Science and Education (ORISE) program. The ORISE Program provides opportunities for undergraduate students, recent graduates, graduate students, postdoctoral researchers, and faculty researchers. NETL utilizes the ORISE program to support research within NETL's Research & Innovation Center.

- Interested candidates should apply to the ORISE program online at http://www.orau.gov/netl/
- In the online application, list **Christina Lopano as your requested mentor.** This will associate your application with this posting.
- If you have additional questions please contact Patricia Adkins-Coliane, Patricia.adkins-coliane@netl.doe.gov, who is the NETL ORISE program contact.

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (1)
  - **Computer, Information, and Data Sciences** (16)
  - **Earth and Geosciences** (21)
  - **Engineering** (27)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (45)
  - **Mathematics and Statistics** (10)
  - **Other Non-Science & Engineering** (13)
  - **Physics** (16)
  - **Science & Engineering-related** (1)
  - **Social and Behavioral Sciences** (28)