

Opportunity Title: Research Scientist/Engineer

Opportunity Reference Code: NETL-2018-06-9-Siriwardane

Organization National Energy Technology Laboratory (NETL)

Reference Code NETL-2018-06-9-Siriwardane

Application Deadline 7/14/2018 11:59:00 PM Eastern Time Zone

Description TITLE: Research Scientist/Engineer

DEPARTMENT: U.S. Department of Energy/National Energy Technology Laboratory (NETL)

**NETL CONTACT: Ranjani Siriwardane
(Ranjani.siriwardane@netl.doe.gov)**

DUTY LOCATION: Morgantown, WV

ACADEMIC LEVEL: BS

POSITION INFORMATION: 1-year appointment; full time (40 hours per week) with the possibility of extension

CLOSING DATE: July 15, 2018

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

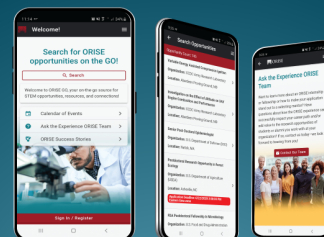
SUMMARY:

Through the Oak Ridge Institute for Science and Education (ORISE) this posting seeks motivated researchers who are interested in performing research as part of the chemical looping combustion oxygen carrier development Team at NETL. NETL is a multi-disciplinary, scientific and technical-oriented national laboratory. NETL's Office of Research and Innovation Center (RIC) conducts research on chemical looping combustion as a potential technique for combustion of fossil fuels that would produce sequestration ready carbon dioxide.

Chemical-looping combustion (CLC) has been suggested as an energy-efficient method for producing high-purity CO₂ from combustion of fuel.

This is an entirely new combustion technology that involves the use of an oxygen carrier, such as metal oxide, that transports oxygen from the air to the fuel, thereby avoiding direct contact between fuel and air. Development of efficient oxygen carriers is essential to successfully operate a CLC system.

Successful candidates will perform their research in the laboratories at NETL to develop oxygen carriers and perform economic evaluation of CLC technology. Flow reactor studies, thermo- gravimetric analysis, sample preparation for flow reactor studies, thermodynamic analysis and determining reaction mechanisms, energy analysis, chemical and physical characterization of oxygen carriers, will be conducted in the laboratory. Applicants with experience/education in economic/system analysis, designing experimental techniques, performing laboratory experiments and analyzing data are preferable.

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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 to apply classroom knowledge in a real-world setting to learn about NETL's core mission areas.

- Interested applicants should complete the online application at <http://www.ora.gov/netl/>. For questions or issues, please email both Terry.Howard@ora.gov and Kerri.Fomby@ora.gov.
- In the online application, **list Ranjani Siriwardane as your requested mentor**. This will associate your application with this research opportunity. Please send a CV to ranjani.siriwardane@netl.doe.gov.
- If you have additional questions, please contact Patricia Adkins-Coliane, Patricia.adkins-coliane@netl.doe.gov, who is the NETL Graduate Education Program Manager.

The participant(s) will be assigned to the program solely for the educational benefit it provides. The assigned project should not include activities that are reserved for federal employees nor should it require a participant to perform inherently governmental functions such as: supervise or mentor federal employees or federal contractor staff, hire or fire anyone; have budget, program management, or signature authority; carry an official job title; or function in any way as a representative of the federal government.

Eligibility Requirements

- **Degree:** Bachelor's Degree.
- **Academic Level(s):** Post-Bachelor's.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#))
 - **Communications and Graphics Design** ([2](#))
 - **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** ([2](#))
 - **Physics** ([16](#))
 - **Science & Engineering-related** ([1](#))
 - **Social and Behavioral Sciences** ([27](#))