Opportunity Title: Heterogeneous Catalysis (mixed metal oxides)
Opportunity Reference Code: NETL-2018-06-6-Shekhawat

Organization National Energy Technology Laboratory (NETL)

Reference Code NETL-2018-06-6-Shekhawat

Application Deadline 7/31/2018 11:59:00 PM Eastern Time Zone

Description

TITLE: Heterogeneous Catalysis (mixed metal oxides)

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

NETL CONTACT: Dushyant Shekhawat; dushyant.shekhawat@netl.doe.gov

DUTY LOCATION: Morgantown, WV

ACADEMIC LEVEL: PhD

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

CLOSING DATE: June 30, 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:

The Reaction Engineering Team at the National Energy Technology Laboratory (NETL) is seeking a post-doctoral or early-career researcher with experience in heterogeneous catalysis and knowledge of mixed metal oxide chemistry – particularly in the specialized research and development of these materials for hydrocarbon conversion reactions. A thorough knowledge in the areas of materials synthesis, characterization (e.g. XRD, XPS, SEM, TEM, FTIR, etc.), as well as activity testing and data analysis is highly desired. The candidate must possess knowledge and practical experience with state-of-the-art mixed metal oxide catalyst fabrication, characterization, and reaction engineering. Knowledge and hands-on experience is required in the understanding of the structure and behavior of these materials in different gaseous and reaction environments. The selected candidate will research closely with the team as well as other researchers at NETL for the development of mixed metal oxide catalysts for the conversion of different hydrocarbon fuels into products (e.g. syngas).

KEY REQUIREMENTS:

- **Preferred qualifications:** A Ph.D. in Chemistry, Chemical or Mechanical Engineering. The qualifications above plus hands-on experience is required in materials design, synthesis, and characterization, hydrocarbon conversion reactions or related applications.
- **Minimum qualifications:**An M.S. in Chemistry, Chemical Engineering, Mechanical Engineering, or a related field, with a focus on mixed metal

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oxide synthesis for catalytic applications, heterogeneous catalysis, materials or chemical processing.

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.orau.gov/netl/. For questions or issues, please email both Terry.Howard@orau.org and Kerri.Fomby@orau.org.
- In the online application, **list Dushyant Shekhawat as your requested mentor.** This will associate your application with this research opportunity. Please send a CV to Dushyant.shekhawat@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:** Doctoral Degree.
- **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)