

Opportunity Title: Physical Scientist - PIP

Opportunity Reference Code: NETL-2020-PIP-Siriwardane-1

Organization National Energy Technology Laboratory (NETL)

Reference Code NETL-2020-PIP-Siriwardane-1

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 Research and Innovation Center's (R&IC) core mission areas.

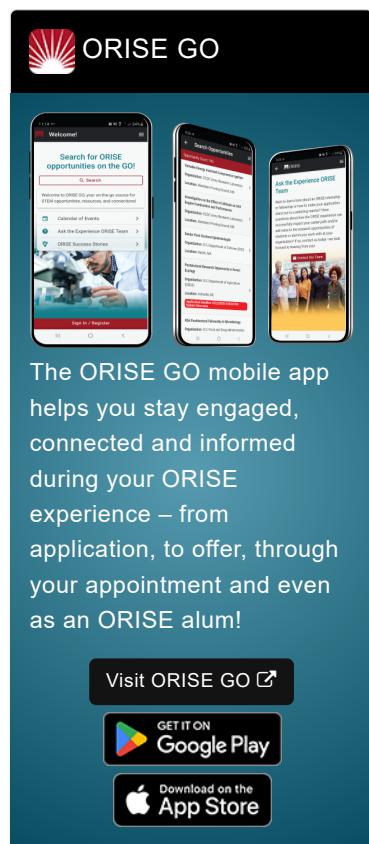
In the online application **list Ranjani Siriwardane as your requested mentor**. This will associate your application with this posting. Please send a CV to ranjani.siriwardane@netl.doe.gov

A complete application consists of:

- An application
- Transcripts – [Click here for detailed information about acceptable transcripts](#)
- A current resume, including academic history, employment history, relevant experiences
- Two educational or professional references

All documents must be in English or include an official English translation.

If you have questions, send an email to NETLinfo@ornl.org. Please include the reference code for this opportunity in your email.



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Application Deadline 4/30/2020 11:59:00 PM Eastern Time Zone

Description Through the Oak Ridge Institute for Science and Education (ORISE) this posting seeks an undergraduate student to engage in projects regarding novel processes for conversion of coal to energy and useful chemicals at the National Energy Technology Laboratory. The new processes have to be more economical than the current commercial coal conversion technologies and should contribute to no carbon dioxide emissions. These processes involve both catalytic and non catalytic methods. Analysis of energy and material balances to obtain the optimum process will be conducted. Laboratory scale experiments will also be conducted to obtain parameters necessary for the optimization process.

Goals of the project are to provide the student with following skills.

1. Processes for coal conversion to energy and valuable chemicals
2. Heat and material balances for the processes and process optimization
3. Use computer programs necessary for energy analysis
4. Conduct laboratory experiments to get necessary data for the energy analysis

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Qualifications Undergraduate in Chemical Engineering who has completed two years of necessary course work.

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Any degree .
 - **Academic Level(s):** Undergraduate Students.
 - **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](#))

Affirmation I certify that I:

- I am currently pursuing an undergraduate degree