

Postdoctoral Research Associate in Low-Carbon  
Hydrogen Production  
University of Wyoming

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Posted Aug. 30, 2024, set to expire Dec. 30, 2024

**Job Title** Postdoctoral Research Associate in Low-Carbon Hydrogen Production  
**Department** Department of Civil & Architectural Engineering  
**Institution** University of Wyoming  
Laramie, Wyoming

**Date Posted** Aug. 30, 2024

**Application Deadline** Open until filled  
**Position Start Date** Sep. 1, 2024

**Job Categories** Post-Doc

**Academic Field(s)** Energy Technology

**Job Website** <https://www.zhailab.us/>

**Apply Online Here** [https://eeik.fa.us2.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX\\_1/job/242715/?utm](https://eeik.fa.us2.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX_1/job/242715/?utm)

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**Job Description**

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**The Laboratory for Low-Carbon Energy and Environmental Sustainability in the College of Engineering and Physical Sciences at the University of Wyoming (UW) now has two postdoctoral research associate positions in low-carbon hydrogen production.**

[The Laboratory for Low-Carbon Energy and Environmental Sustainability](#) promotes a long-term vision for the role of both technology and policy to cope with complex energy, environmental and natural resource challenges. The laboratory conducts systems research that addresses technical, economic, and policy issues related to energy and the environment. Current interests of research mainly include low-carbon energy systems, hydrogen energy, carbon capture and storage, and the energy-water nexus. The laboratory pioneers the development of the Integrated Environmental Control Model (IECM), a computer-based tool used worldwide for power plant modeling and assessment. The principal investigator is Dr. Haibo Zhai, Professor and the Roy & Caryl Cline Distinguished Chair in Engineering at UW. He is also an Adjunct Professor in the School of Energy Resources at UW and in the Department of Engineering and Public Policy at Carnegie Mellon University.

The laboratory is hiring two postdoctoral research associates to work on a new project on low-carbon hydrogen production. This *project* is to examine technical, economic, and environmental issues related to low-carbon hydrogen production from natural gas resources. Postdoctoral research associates will conduct thermodynamic process modeling and techno-economic analysis for low-carbon hydrogen production. Deep carbon capture and storage beyond 90% CO<sub>2</sub> removal or advanced nuclear technology (e.g., small and micro modular reactors) will be employed for hydrogen production to lower life cycle greenhouse gas emissions. The performance and cost models of low-carbon hydrogen production to be developed will be further incorporated into the IECM. In addition, postdoctoral research associates will prepare progress reports and present them at project review meetings, present results at national and international conferences, publish work in peer-reviewed academic journals, and develop training materials for the relevant educational program.

A doctoral degree in chemical and environmental engineering, mechanical engineering, nuclear engineering, or other energy-related disciplines is required for this position. Applicants with expertise on hydrogen production process modeling, nuclear reactor modeling, ASPEN Plus, and techno-economic analysis are strongly encouraged. Please complete the online application and upload the following for a complete application: cover letter, resume, and contact information for four work-related references. Here is the application website:

[https://eeik.fa.us2.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX\\_1/job/242715/?utm\\_medium=job](https://eeik.fa.us2.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX_1/job/242715/?utm_medium=job)

. Additional information is also available on the application website. For any questions about this

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position, please contact Prof. Haibo Zhai by email at [hzhai@uwyo.edu](mailto:hzhai@uwyo.edu).

### Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

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