



The Combustion Institute

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Poly (Oxymethylene) Ethers-Postdoctoral Researcher

Description: The new hire will be working in a fast pace, and highly interdisciplinary area of research aiding in the development of Poly(oxymethylene) ethers (POM-E), which possess low sooting-high cetane potential for use as a biofuel blendstock in Mixing Controlled Compression Ignition (MCCI) engines. Sponsored by the DOE's Co-optimization of Fuel and Engines (Co-Optima) program, the new hire will be required to work collaboratively with researchers from CSU, NREL, CU-Boulder, and Yale and will lead activities related to the synthesis of POM-Es. Specific responsibilities will include:

- Interfacing with NREL scientists to design an experimental plan to synthesize and separate desired POM-E oligomers.
- Commissioning laboratory facilities required to carry out POM-E synthesis/separation
- Using analytical GC-based techniques to quantify POM-E mixture composition and product yields
- Data analysis and preparation of DOE reports, manuscripts, and grant applications
- Project management including facilitating bi-weekly conference calls and assisting in the preparation of DOE reports
- Working with and training PhD students in the laboratory on the synthesis/separation of POM-E

Environment: The Engines and Energy Conversion Laboratory (EECL) at CSU located in Fort Collins, CO was founded in 1992 and is among the largest academic engine research facilities in the United States. Located at the 100,000 ft² Powerhouse Energy Campus, the 24,000 ft² EECL houses research programs focused on performance, control, and emissions from compression ignition (CI), spark ignition (SI), precombustion chamber (PCC) ignition, and dual fuel engines powered by natural gas (NG), liquid petroleum fuels, ethanol, and advanced biofuels. The EECL currently maintains ten instrumented, operational test engines ranging from 1 to 2500 hp and an extensive collection of engine performance and emissions test equipment. Researchers at the EECL and the CSU Energy Institute are active in a number of research projects focused on sustainable energy including a diverse research portfolio related to the development, characterization, and end use of biofuel blendstocks for transportation and power generation applications.

Direct link to job posting: <https://jobs.colostate.edu/postings/66042>

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Essential Requirements

Qualifications: The Engines and Energy Conversion Laboratory at Colorado State University (CSU) is seeking a talented postdoctoral fellow starting May/June 2019. The ideal candidate should have:

- PhD in Chemical Engineering, Chemistry, Mechanical Engineering or related field
- Strong background in laboratory based biofuel synthesis and characterization
- Ideally, experience with catalytic based fuel synthesis
- Strong communication skills and experience working with a large multi-disciplinary team
- Strong publication and presentation record
- Ability to design and execute a research plan with minimal supervision
- US citizenship is desired but not required to facilitate NREL site visits

How to Apply

Application: Interested candidates should apply here:

<https://jobs.colostate.edu/postings/66042>

For any questions directly contact Dr. Windom by way of email address provided below.

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