Oxylus Energy
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Oxylus Energy

the carbon-conversion company

Electrochemical Engineer
New Haven, CT | Full Time | On-Site

About *Oxylus Energy*

Oxylus Energy is a novel climatetech company focused on providing real solutions that can scale. *Oxylus Energy* is a public benefit corporation founded in 2023 with a mission to displace fossil fuels through the direct conversion of CO_2 into carbon-neutral fuels and chemicals. Oxylus is developing cutting edge CO_2 electrolysis technology for the direct production of green methanol, reducing the energy requirement and enabling both onsite fuel production and carbon conversion. This solution has the potential to provide an economic pathway to decarbonization for the hard-to-abate sectors of aviation, shipping, and petrochemicals which are responsible for ~11% of global GHG emissions.

Oxylus Energy is located in New Haven, CT and is supported by top climate technology funders including Toyota Ventures, Azolla Ventures, Earth Foundry, and Connecticut Innovations. Joining us now is an opportunity to play a fundamental role in the development of our team and technology so that we can bring our transformative solution to market.

Job Brief

The ***Electrochemical Engineer*** will be a key member of the Oxylus research and development team and will oversee testing and scale-up of membrane electrode assemblies (MEAs) for Oxylus Energy's CO_x electrolyzers. This person will be responsible for testing the performance of MEAs under a range of conditions, providing diagnostic analysis for failure mechanisms, and collaborating with other team members to scale-up the electrolyzer cell. This person will design, perform, and maintain electrochemical tests, including maintaining electrolyzer test stands. The ideal candidate is a chemical engineer, materials scientist, or mechanical engineer with a strong electrochemistry background including hands-on experience in fuel cells or electrolyzers. Previous experience with CO_x electrolyzers is a plus.

What You Will Do

- Perform electrochemical tests and work-up, analyze, and interpret results.
- Create SOPs for test stands and relevant equipment.
- Contribute to the testing, optimization, and scale-up of Oxylus Energy's electrolyzers including preliminary process modeling.
- Design and perform experimental studies to understand failure mechanisms.
- Assemble MEAs and perform accelerated durability testing.
- Characterize physical and chemical properties of materials.
- Analyze data and document results carefully.
- Manage projects and communicate progress with company leadership.

Additional responsibilities might include:

- Manage junior team members.
- Collaborate with industry and academic partner organizations on join projects.
- Prepare presentation for diverse stakeholders.

Who You Are

- Ph.D. in chemical engineering, materials science, or mechanical engineering (or related field) **or** BS in chemical engineering, materials science or mechanical engineering with 5+ years relevant industry experience.
- 3+ years relevant industry experience with electrolyzer or fuel cells, including operating test stands and performing electrochemical measurements.
- Experience in early stage technology development is a plus, including scaling up from bench to pilot scale.
- Experience in thermal and mass transport modeling.
- Detail oriented with strong organization skills.
- Excellent communication skills, both oral and written as well as technical writing.
- Highly motived and milestone driven.
- Strong commitment and adherence to laboratory safety.
- Reliable, action-oriented, hard-working, and a team player.

Salary

- **$90-$130k**, commensurate on experience, education, and skills.

Oxylus Energy Benefits

- Medical, dental, and vision coverage
- Paid sick days and vacation
- Competitive salary and equity compensation
- Diverse and inclusive work environment

We are convinced that the distinct contributions of each person fuel our success. To ensure our products and culture remain inclusive of all viewpoints and experiences, we uphold a policy of non-discrimination regarding race, religion, national origin, gender identity or expression, sexual orientation, age, as well as marital, veteran, or disability status.