CEET 6

Enhancement of Hydrogen Purity in Chemical Looping for Fuel Cell Applications

Topic suitable for Master Thesis / Bachelor Thesis / Plant Design / Project Lab

Project Description

The Fuel Cells and Hydrogen Systems Group boasts over a decade of innovative work in Chemical Looping, culminating in a proven, eco-friendly hydrogen production method for fuel cells, with achieved purities up to 99.999%. The group's current endeavor is to further elevate the purity of hydrogen by leveraging an automated test rig within their hydrogen lab. In this master's thesis, you will scrutinize the influence of various process parameters, initial gases, and materials on the quality of hydrogen, targeting advancements in Chemical Looping to attain even superior purity levels. As part of this seasoned team, you will immerse yourself in a collaborative environment enriched with ongoing international research efforts and a solid foundation in Chemical Looping and material innovation. This work will not only push the boundaries of hydrogen production technology but also place you at the forefront of sustainable energy research.

Requirements

This project is suited for students in Process Engineering, Technical Chemistry, Materials Science, or Environmental and Systems Sciences, looking to apply their knowledge practically and contribute to sustainable technology development.

Benefits

- **Paid Master Thesis**: Attractive compensation for the thesis duration.
- **Comprehensive Support**: Close guidance from our experienced research team.
- **Scientific Publications**: Opportunity to contribute to scientific publications, advancing scientific progress.

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