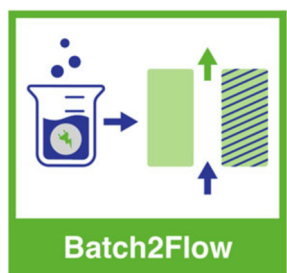




Student Research Assistant

Student Research Assistant for Experimental Work on Electrochemical Hydrogenation Reactions



Research area

- ☐ Batteries
- ☐ Fuel cells and electrolysis
- ☒ Electrocatalysis

Alignment

- ☒ Experimental
- ☒ Electrical Characterization
- ☐ Material analysis
- ☒ Modeling
- ☒ Simulation
- ☒ Literature Research

Course of study

- ☒ Electrical engineering
- ☒ Mechanical Engineering
- ☒ Chemical Engineering
- ☒ Physics
- ☒ Techno mathematics
- ☒ Materials Science

Starting date

As soon as possible

Contact person

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Motivation

To achieve climate goals, it is essential to electrify the chemical industry. A promising approach is the use of electroorganic synthesis routes. These offer several advantages compared to thermally driven reactions: Renewable electricity can be used directly for oxidation and reduction reactions, often eliminating the need for toxic or hazardous oxidizing and reducing agents. Additionally, electrochemical reactions typically proceed under normal conditions, avoiding high pressures and extreme temperatures.

As part of this project, we are seeking a motivated **student research assistant (m/f/d)** to support our team in investigating electrochemical reaction mechanisms.

Your Responsibilities:

- Conducting experimental measurements using the Rotating Disk Electrode (RDE) to characterize electrochemical reactions
- Investigating reaction kinetics under varying conditions (potential, rotation speed, temperature)
- Preparation and handling of different electrolyte solutions with systematic variation of concentrations, pH values
- Recording and evaluating cyclic voltammograms (CV)
- Documentation and preparation of experimental data for

Notes

We offer you excellent supervision and the opportunity to work in an interdisciplinary team on a forward-looking topic. IAM-ET offers a constantly growing team with expertise in the field of battery, fuel cell and electrocatalysis research at Campus South. Independent working and the motivation to work on current research topics are required. For further information, please contact your contact person Emmanuel Stripling at any time. If you are interested, please send your CV, transcript of records and certificate of enrollment to Emmanuel.Stripling@kit.edu.