

PhD Student (f/m/d)

with background in Chemistry, Material Science, Engineering or similar

Electrodes for Water Electrolysis

Context

For the transformation to a CO₂-neutral society, large amounts of green hydrogen are needed, e.g. for fuel cells, emission-free steel or power-to-X applications (fertilizers, ...). Besides the electricity price, the investment costs and the lifetime of the electrolyzers are significantly responsible for the hydrogen production costs. Due to the large cost reduction potential, alkaline electrolysis with a "anion exchange membrane" (AEM) is a highly attractive technology. It promises to combine the advantages of the established alkaline and acidic membrane-based electrolysis, i.e. low-cost materials with high current densities and high efficiency.

Your task

You are working on electrodes for AEM electrolysis in a joint project with partners from industry and the university. The aim is to increase the efficiency and lifetime of the electrodes. To achieve this, you will optimize the microstructure of the electrodes based on the partners' materials and carry out measurements on an electrolysis testbench.



Your profile

- Excellent communication skills and team spirit are absolutely necessary
- You are interested in the development of novel materials for a sustainable society
- You work target-oriented and structured
- You enjoy working in the lab

The position

- We offer excellent working conditions in the interdisciplinary "electrochemical energy systems" EES group with a nice atmosphere
- Cutting edge equipment for electrolysis and material development
- Typical duration of a PhD is planned for three years (80% TV-L 13)
- The working language is English or German
- Earliest possible start: April 2021
- Family friendly, flexible working hours

For more information feel free to contact us or visit

www.ees-lab.org

Please send your application via mail to

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