

# Student Research Assistant (w/m/d)

Field of study: engineering, chemistry, material science, physics (or similar)

## Development and Analysis of Electrodes for Anion-Exchange Membrane (AEM) Water Electrolysis

The junior research group "Electrochemical Energy Systems" (EES) works on fuel cells, batteries and electrolyzers. The group is dedicated to integrating latest material developments into state-of-the-art electrochemical energy systems.

AEM water electrolysis offers the advantages of both commercial alkaline water electrolysis and proton exchange membrane water electrolysis. This includes a non-acidic operational environment and the ability to operate using an ion exchange membrane. These benefits make it possible to use more sustainable catalyst materials while also enabling higher power densities.

The AEM team within the EES group is primarily focused on the fabrication and characterization of electrodes and anion exchange membranes. We offer the opportunity to work in a friendly environment and an interesting and growing scientific field. This Hiwi job is for a duration of three months with the possibility of extension. Working hours will be between 20 and 40 hours per month, to be determined during the hiring process.



### Your profile

- You are matriculated as a student in a German university and currently residing in Germany
- You possess strong communication and teamwork skills
- You are interested in working in the field of energy storage and sustainable technologies
- You are able to work in a target-oriented and structured manner
- Experience in lab work, spectroscopy, and/or electrochemistry would be beneficial

### The position

- Fabrication of electrodes membrane assemblies
- Preparing cell components and assembling water electrolyzer cells
- Performing in-situ and ex-situ characterization of water electrolyzer cell components
- Flexible working-hours distribution
- Eventually, writing your bachelor or master thesis in our group

**Please send your application including CV, transcript of records and short motivation letter via e-mail to [mohamed.elshamy@imtek.uni-freiburg.de](mailto:mohamed.elshamy@imtek.uni-freiburg.de)**

Mohamed Elshamy, M.Sc.  
Electrochemical Energy Systems  
Laboratory for MEMS Applications  
Department of Microsystems Engineering - IMTEK  
University of Freiburg  
Georges-Koehler-Allee 103, 79110 Freiburg

For more information feel free to contact us or visit: [www.ees-lab.org](http://www.ees-lab.org)