



PhD position in Artificial Photosynthesis

In the Emmy-Noether Group “SPECSY” at the Institute for Physical and Theoretical Chemistry we are offering a

PhD position in Artificial Photosynthesis (f/m/d; E 13 TV-L, 50-67 %)

with the planned start date of November 1st 2021 and a funding period of three years.

Project description

Green Hydrogen promises to play a key role in the decarbonisation of the energy sector on a global scale. Therefore, there is a huge social and economic interest in sustainably producing Hydrogen from renewable energies at low costs and high efficiency. In the “H2Demo” project (www.h2demo.de), hydrogen will be directly produced from water and sunlight via photoelectrochemical water splitting, also called “artificial photosynthesis” – an interdisciplinary approach combining Physics, Chemistry, and Materials Science. The project consortium consists of five companies, four university groups and two non-university research institutions and is taking on the task of demonstrating the benefits and potential of photoelectrochemical water splitting at the highest international level. For this, state of the art III-V/Si multi-junction solar cells are used as photoabsorbers. At the end of the project, solar water splitting demonstrator modules will be produced and tested outdoors.

Your responsibilities are

- to work in an interdisciplinary research team on solar water splitting by artificial photosynthesis in the project „H2Demo“
- to conduct experiments on high-efficiency photoelectrochemical solar cells
- to evaluate experimental data (scripting skills, such as Python, beneficial but not necessary)
- to publish, discuss, and present the results of your research

We expect

- a university degree (M.Sc. or equivalent) in physics, chemistry, materials or environmental science, or related fields
- an interest in the investigation and manipulation of solid-liquid interfaces for renewable energy storage
- experience in (photo)electrochemistry, catalysis or semiconductor physics
- willingness and ability to work in an international and interdisciplinary team

The university seeks to raise the number of women in research and teaching and therefore urges qualified women academics to apply for these positions. Equally qualified applicants with disabilities will be given preference.

Your application should contain a letter of motivation, a CV, certificates and transcript of records (all in a single pdf), and the pdf or link to a written document such as your M.Sc. thesis. Please submit your documents to h2demo-phd@posteo.de with the subject „H2Demo-PhD“. For further questions, contact Dr. Matthias May at matthias.may@uni-ulm.de. Review of applications will start Oct. 01 2021 and ends when the position is filled.