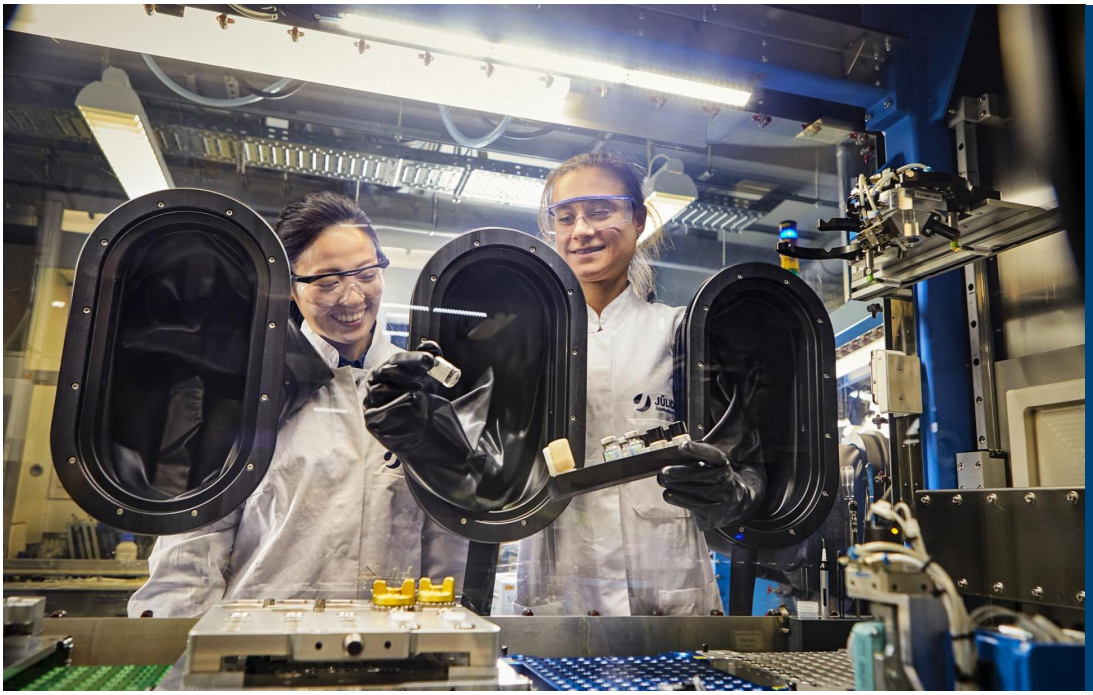

Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,400 employees in one of Europe's biggest research centres and help us to shape change!

Would you like to contribute to the energy transition in Germany through your work? Then the Helmholtz Institute Erlangen-Nürnberg (for Renewable Energy) (HI ERN) is the right place for you! The HI ERN forms the core of the close partnership between Forschungszentrum Jülich, Helmholtz-Zentrum Berlin for Materials and Energy, and Friedrich-Alexander-Universität Erlangen-Nürnberg at the Erlangen site. The collaboration relates to the areas of innovative materials and processes for photovoltaic energy systems and hydrogen as a storage and carrier medium for CO2-neutral energy. Support us researching and developing solutions for the climate-neutral, sustainable, and cost-effective utilization of renewable energies. Further information about the HI ERN and its pioneering research projects can be found at https://www.hi-ern.de

We are offering a

PhD Position – System development for electrochemical hydrogen storage in acetone/ isopropanol

Your Job:

The department of Electrocatalytic Interface Engineering, headed by Prof. Dr.-Ing. Simon Thiele, focuses on the development, characterization and testing of electrochemical systems from laboratory to industrial scale. Our research plays an integral role in several technological advancements of hydrogen fuel cells, water and CO2 electrolyzers. Our goal is to transfer this knowledge into the development of novel, stable and efficient systems for electrochemical hydrogen storage in acetone/ isopropanol as an innovative solution for seasonal energy storage. The long-term goal is to realize this technology for the energy storage market to serve as a backbone for a renewable future. Your main responsibilities include:

- Evaluation of various electrochemical configurations for acetone/ isopropanol system e.g., acidic or alkaline
- Screening of various materials and components for stability and suitability e.g.,

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our **Online-Recruitment-System!**

Questions about the vacancy?

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email.

www.fz-juelich.de

sealing, electrode or membrane materials
- Identification of different electrochemical setups for an ideal balance between stability, performance and price
- Building a test station for evaluation of electrochemical performance in short stack
- Physical, spectroscopic, and electrochemical characterization of membrane electrode assemblies prior to, during, and after cell operation
- Participation in project meetings
- Coordination with internal and external project partners
- Publication and presentation of research results in relevant journals or at international conferences

Your Profile:
- Evident experience in chemistry, process engineering, chemical engineering, or a similar discipline
- Strong interest in pursuing research on electrochemical systems
- Experience in one (or more) of the following areas is desirable: electrochemistry, electrocatalysis, additive manufacturing (spray coating, doctor blade, slot-die coating), electrochemical impedance spectroscopy, plant engineering
- High motivation for pursuing a PhD within 3 years
- Excellent organizational skills
- Ability to show initiative and work independently
- Excellent cooperation and communication skills and ability to work as part of a team
- Fluent skills in spoken and written English

Our Offer:
We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We offer ideal conditions for you to complete your doctoral degree:
- Excellent scientific and technical infrastructure for conducting high-quality research
- Work with globally unique analytical measurement
- International, interdisciplinary work environment on an attractive campus (AEG Campus), including many collaboration opportunities with partners at Friedrich-Alexander-Universität Erlangen-Nürnberg, Forschungszentrum Jülich, Helmholtz-Zentrum Berlin, and international institutions
- Collaboration with world-leading industry partners
- Diverse options for work-life balance
- Flexible working hours
- 30 days of annual leave and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)
- Further development of your personal strengths, e.g. through an extensive range of training courses; a structured program of continuing education and networking opportunities specifically for doctoral researchers via JuDocS, the Jülich Center for Doctoral Researchers and Supervisors: https://www.fz-juelich.de/en/judocs
- Targeted services for international employees, e.g. through our International Advisory Service

The position is for a fixed term of 3 years. Pay in line with 75 % of pay group 13 of the Collective Agreement for the Public Service (TVöD-Bund) and additionally 60 % of a monthly salary as special payment („Christmas bonus“). The monthly salaries in euros can be found on page 66 of the PDF download: https://go.fzj.de/bmi.tvoed . Further information on doctoral degrees at Forschungszentrum Jülich including our other locations is available at: https://www.fz-juelich.de/gp/Careers_Docs

Place of employment: Nuremberg

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.