



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 7,500 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 – Fuel Cell Systems

Your Job:

You will work in the Electrocatalytic Interface Engineering department, which is headed by Prof. Dr.-Ing. Simon Thiele. The department focuses on the fabrication, analysis and simulation of functional materials to find an optimal structure on a small scale from the micrometer to the nanometer. The materials and systems examined play an essential role in sustainable technologies such as water and CO₂ electrolyzers as well as in fuel cells. The aim is to make a significant contribution to the development of electrochemical energy conversion as a future key player in electromobility and energy policy in general. You will work as a research scientist and engineer to develop novel technologies in the area of electrochemical energy storage and conversion using liquid organic hydrogen carriers (LOHC), for example with the isopropanol/acetone couple. Some of your responsibilities will include:

- Design, manufacturing, and evaluation of catalyst and transport layers for Direct Isopropanol Fuel Cells (DIFC)
- Optimization and tuning of catalyst layer performance and durability: morphology, hydrophobicity, porosity

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

- Product analysis and analytical chemistry; investigation of side reactions
- System process analysis and control in full technical cells – humidity, temperature, pressure drops, voltage drops
- Supervision of university students
- Participation in project meetings
- Coordination with internal and external partners
- Publication and presentation of research results in relevant journals or at international conferences

Your Profile:

- Excellent master's degree in Chemical Engineering or a closely related field
- Strong interest in pursuing research in electrochemistry
- Previous experience with fuel cells, electrolyzers or redox flow batteries is a plus
- 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
- Excellent 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:

- A lively scientific environment within the institute and possibilities for cooperation with excellent partners at the Friedrich-Alexander-Universität Erlangen-Nürnberg, the Forschungszentrum Jülich, the Helmholtz-Zentrum Berlin and abroad
- Interaction and cooperation with world-leading industrial partners
- Excellent environment to perform sound, high-quality research
- Work with worldwide-unique electrochemical characterization techniques
- Excellent training in electrochemistry
- Extensive further education opportunities
- Manifold support options for combining career and family
- 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)
- 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 euro can be found on the BMI website: <https://go.fzj.de/bmi.tvued.entgelt> Further information on doctoral degrees at Forschungszentrum Jülich (including its various branch offices) is available at <https://www.fz-juelich.de/en/careers/phd>

Place of employment: Nürnberg

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.

Further information on diversity and equal opportunities: <https://go.fzj.de/equality>