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!

The Institute of Energy Technologies - Fundamental Electrochemistry (IET-1) focuses on the development of performance oriented and sustainable materials and components for the electrochemical energy storage and conversion. Aiming to develop sustainable and cost-effective batteries, fuel cells and electrolyzers with improved energy and power density, longer lifetime at maximal safety is the challenge of the projects. These key technologies drive forward the energy transition and structural change in the Rhineland region. Further info on our exciting projects: https://go.fzj.de/IET-1

Join our team to the next possible date as

Postdoc - Stack Characterization for High-Temperature Electrolysis for Power-to-X applications

Your Job:
The joint project PHOENIX - Launch Space Power-to-X plays a central role to align the innovation cycles of P2X technologies with the long-term goals of the energy transition, the European Green Deal and the lignite phase-out. Funded by the German Federal Ministry of Education and Research, the project focuses on two central aspects: accelerated technology development and the sustainable design of P2X value chains. In this versatile and future-oriented postdoctoral position, you will play a key role in the characterization of novel high-temperature electrolysis stacks (Solid Oxide Electrolysis, SOC). You will work on the regenerative production of hydrogen and synthesis gas from resources such as water, carbon dioxide and biogas - a key contribution to the energy transition. Your tasks in detail:

- Planning, supervision and implementation of innovative experiments with solid oxide cells, in both electrolysis and fuel cell mode
- Characterization of the repeating units during stack operation using DC and AC-based techniques such as characteristic curves, cyclic voltammetry and electrochemical impedance spectroscopy

We look forward to receiving your application until 04.06.2025 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

- Participation in the investigation of stacks and cells post-test using spectroscopic or microscopic methods and subsequent optimization
- Advancements of experiments, measuring methods and measuring technology and improvement of experimental equipment
- Presentation of results at renowned conferences and publication in leading journals
- Advice and supervision for doctoral candidates, students and employees
- Supporting the project management through coordination, public relations and the promotion of knowledge transfer into practice

Your Profile:

- Completed Master`s degree in chemistry, electrochemistry, technical chemistry, chemical engineering or a comparable field of study (e.g. engineering with a focus on process engineering or chemistry) and successfully completed doctorate
- Practical knowledge of electrochemistry, electrochemical converters and/or process engineering systems
- Experience in electrochemical characterization, ideally with techniques such as impedance spectroscopy
- Scientific experience in the field of solid oxide fuel cells (SOFC) and/or solid oxide electrolysis (SOEC) is an advantage
- Experience in software tools such as Origin, Matlab, Python/Matplotlib or similar programs for data processing and evaluation. Knowledge of a relevant programming language complements your profile perfectly.
- Responsible way of working and creative initiative in new subject areas
- Enjoying cooperative teamwork
- Very good written and spoken German and English skills

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 support you in your work with:

- Comprehensive training programs and individual opportunities for personal and professional development
- Comprehensive company health management
- Optimal conditions for work-life balance and a family-conscious company policy
- The opportunity to work flexibly (in terms of location), e.g. working from home
- Flexible working hours in a full-time position with the option of slightly reduced working hours (https://go.fzj.de/near-full-time)
- 30 days of annual leave and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)
- A large research campus in the countryside, which offers the best opportunities for networking with colleagues and a sporting balance alongside work

In addition to exciting tasks and a collegial working environment we offer you much more: https://go.fzj.de/Benefits

The position is limited until 30.11.2028. Salary and social benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund), pay groups 13-14, depending on the applicant’s qualifications and the precise nature of the tasks assigned to them. All information about the Collective Agreement for the Public Service (TVöD-Bund) can be found on the BMI website: https://go.fzj.de/bmi.tvoed . The monthly salaries in euros can be found on page 66 of the PDF download.

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