



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 actively shape the structural change in the Rhenish mining area together with us? With us you have the chance to join the newly founded Institute for a Sustainable Hydrogen Economy (INW) with your ideas right from the start. Together with the H₂ demonstration region, the INW forms the "Helmholtz Cluster for sustainable and Infrastructure-Compatible Hydrogen Economy" (HC-H₂). Here, scientific foundations are laid in the field of innovative hydrogen technologies in order to advance research and development approaches with high sustainability potential and attractive economic prospects. At the institute division "Catalytic Interfaces for Chemical Hydrogen Storage" (INW-1, Prof. Dr. Hans-Georg Steinrück), we investigate mechanisms and processes in (electro)chemical energy storage systems. For the purposes, we develop and use advanced (X-ray-based) methods as well as modern data reduction and data evaluation methods, including machine learning and big data analytics.

Join our team to the next possible date as

Postdoc - Operando X-ray Characterization of Hydrogen Storage Materials

Your Job:

- Operando X-ray investigations of energy materials, with a focus on chemical hydrogen storage
- Design, development, and optimization of advanced sample environments and reactors for high-throughput
- Application and further development of X-ray methods (scattering, spectroscopy, imaging) using both in-house infrastructure and synchrotron beamlines
- Execution of operando studies to unravel relationships between structure, morphology, performance (reactivity, selectivity, efficiency), and degradation mechanisms under realistic deployment conditions
- Participation of beam times at international large-scale research facilities (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

DESY, ESRF), including coordination and setup of experiments

- Development of data workflows and analysis strategies (in collaboration with our machine learning team)
- Contribution to scientific publications, project reports, and international conferences
- Supervision and mentoring of PhD students and Master`s students
- Writing and support of third-party funding proposals
- Active contribution to the further establishment and operation of the INW Long-Term Characterization X-Ray Laboratory

Your Profile:

- Master`s degree with PhD in physics, chemistry, materials science, chemical engineering, or a related discipline
- Strong background in X-ray methods; experience with synchrotron or neutron methods and/or instrumentation is highly desirable
- Knowledge of catalysis and energy storage materials, and interest in operando characterization
- Experience with programming / scripting (ideally Python), and, optionally, with control systems (SPS/PLC, EPICS, Tango)
- Fluent in written and spoken English
- Very independent and self-motivated way of working but also excellent teamwork skills
- High motivation to take on responsibility, lead projects and develop new research directions
- Willingness for international travel and extended research stays at partner facilities

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:

- **KNOWLEDGE & FURTHER TRAINING:** Your professional development is important to us – we provide targeted, individual support
- **HEALTH & WELL-BEING:** Your health is important to us. You can look forward to a comprehensive occupational health management program with a wide range of offerings - e.g., a beach volleyball court, running groups, yoga classes, and much more. In addition, our company medical service and an experienced social counseling team are available to assist you on site
- **FLEXIBILITY:** Flexible working time models, including options close to full-time (<https://go.fzj.de/near-full-time>), allow you to tailor your working hours to suit your individual needs
- **WORK-LIFE BALANCE:** Optimal conditions for balancing work and private life, as well as a family-friendly company policy. The option of flexible working (in terms of location) is generally available after consultation and in line with upcoming tasks and (on-site) appointments
- **VACATION:** You will receive 30 days of vacation (depending on the chosen working time model) plus additional days off (e.g. between Christmas and New Year`s)
- **FAIR REMUNERATION:** Depending on your existing qualifications and the tasks assigned to you, you will be classified in pay grade 13 of the TVöD-Bund (Collective Agreement for the Public Service). All information on the TVöD-Bund collective agreement can be found on the BMI website: <https://go.fzj.de/bmi.tvloed> The monthly salaries in euros can be found here: <https://go.fzj.de/bmi.tvloed.entgelt>
- **FIXED-TERM:** The position is limited to 2 years but with the prospect of extension
- **SUPPORT FOR INTERNATIONAL EMPLOYEES:** Our International Advisory Service makes it easier for international employees to get started
- **CAREER CENTER:** You will receive explicit support with regard to your career

development opportunities: <https://go.fzj.de/careercenter>

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer:

<https://go.fzj.de/benefits>

Place of employment: Brainergy Park Jülich

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>