



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. For more information on HI ERN and its main research areas, please visit <https://www.hi-ern.de>

We are offering a

PhD Position - Process Development for Chemical Hydrogen Storage

Your Job:

You will be part of the top-class scientific department "Chemical Hydrogen Storage" at the renowned HI ERN. Under the direction of Prof. Dr. Peter Wasserscheid, our department researches and develops a wide range of topics related to chemical hydrogen storage along the entire process chain. We place a particular emphasis on LOHC technology, addressing issues across different scales. Our exciting research topics include the development of tailor-made catalysts and processes, as well as the realization of demonstrators. Our department is a world leader in the field of LOHC technology. Apply now and become part of this innovative research team!

Develop innovative processes for releasing hydrogen from LOHC molecules, including conventional dehydrogenation and exploring oxidative dehydrogenation with various oxidants. Evaluate concepts, test catalysts, and design and optimize continuous plants.

Your tasks in detail:

- Conceive chemical processes based on thermodynamic principles and fundamentals of chemical reaction engineering

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

- Construct and operate continuous experimental plants
- Use state of the art techniques for the characterization and optimization of applied catalysts
- Develop analytical procedures and data processing methods to determine key performance indicators
- Evaluate your results formulate conclusions and present them at national and international conferences and in scientific journals

Your Profile:

- An excellent master's degree in chemical engineering or a related discipline
- Lab experience is required
- Knowledge in the field of heterogeneous catalyst systems and chemical hydrogen storage is an advantage.
- Ability to work independently with intrinsic motivation and initiative in a team.
- Joy and expertise in complex challenges in reaction engineering and thermodynamics.
- Competence in computer-aided methods for data analysis and modelling, e.g. with Python, advanced MS Excel Sheets, Aspen or multiphysics simulation tools.
- Excellent cooperation and communication skills complete your profile; proficiency in English is essential

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:

- An inspiring environment that invites you to conduct high-quality research and successfully implement your own ideas
- Excellent infrastructure for transferring scientific findings into technical applications
- Being part of an interdisciplinary international team
- Benefit from excellent training in reaction and process engineering to further expand your portfolio
- An open scientific environment, where you will have the best opportunities for cooperation with first-class partners at the Friedrich-Alexander University Erlangen-Nuremberg (FAU), Forschungszentrum Jülich (FZJ), Helmholtz-Zentrum Berlin (HZB), leading industrial companies in the field of chemical hydrogen storage, and research institutions abroad
- Individual internal and external training courses to further develop your potential
- 30 days of annual leave and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)

In addition to exciting tasks and a collaborative working atmosphere in Jülich, we have a lot more to offer: <https://go.fzj.de/benefits>

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.tvloed> . 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: Erlangen

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.

