



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 centers and help us to shape change!

Higher alcohols are valuable intermediates that can serve as bio-based fuels, fuel additives, and chemical building blocks. Their synthesis from renewable feed stocks, such as methanol and ethanol, contributes to sustainable energy solutions and the production of green chemicals, reducing dependence on fossil resources. The master thesis is conducted at the Institute of Energy and Climate Research, Electrochemical Process Engineering (IET-4).

We are offering a

Master Thesis – Heterogeneous Catalysis for Higher Alcohols Synthesis

Your Job:

- Literature research and process understanding of higher alcohol synthesis
- Catalyst preparation, characterization, and performance testing
- Reaction parameter optimization (temperature, pressure, feed composition, etc.)
- Product analysis (GC, MS, etc.) and interpretation of results
- Data analysis and reporting of results
- Thesis writing and presentation of findings

Your Profile:

- Current master's student in chemistry, chemical engineering, or a related discipline
- Basic knowledge in catalysis, surface chemistry, or reaction engineering
- Practical laboratory skills and interest in reaction mechanisms
- Motivation to work in an interdisciplinary team

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:

- **Meaningful research:** Your thesis deals with a future-oriented, socially relevant topic with direct practical relevance. You will also contribute to sustainable chemical process development.
- **Practical relevance:** With us, you will gain valuable practical experience alongside your studies.
- **Team and collaboration:** Look forward to working in a dedicated, international, and collaborative team.
- **Personal responsibility:** You will organize your tasks independently – from preparation to implementation.
- **Flexibility:** Flexible working hours make it easier for you to balance work and study.
- **Fair remuneration:** We will pay you appropriately for your thesis.
- **Campus experience:** Our research campus in the countryside provides ideal conditions for collegial exchange and sporting activities right on site.
- **Knowledge and further training:** We offer you comprehensive training courses and individual opportunities for personal and professional further development as well as training in catalyst synthesis, characterization, and reaction engineering.
- **Scientific environment:** Research in a stimulating and international scientific environment.
- **Supervision and support:** We offer mentoring by experienced researchers.

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

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 can be found at <https://go.fzj.de/equality> and on specific support options at <https://go.fzj.de/womens-job-journey>.

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

Contact Form:

If your questions have not yet been answered via our **FAQs**, please send us a message via our **contact form**.

Please note that for technical reasons we cannot accept applications by e-mail.

www.fz-juelich.de

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