

For the Institute for Chemical Technology and Polymer Chemistry (ITCP), we are currently seeking to recruit, limited to three years, an

Academic Employee / PhD student
Development and operando characterization of heterogeneous catalysts for the
methanol synthesis

The Chair in Chemical Technology and Catalysis (www.itcp.kit.edu/grunwaldt) focuses on the design, testing and in-depth characterization of heterogeneous catalysts, especially under dynamic reaction conditions. In the context of the German energy transition ("Energiewende"), we address the topic of chemical energy storage as liquid fuels and chemicals (e.g. methanol), respectively. By using so-called "operando" methods, a detailed understanding of catalysts will be obtained. Interdisciplinary cooperation with groups from the fields of synthesis and modelling in the framework of the priority program SPP 2080 "Catalysts and reactors under dynamic reaction conditions for energy storage and conversion" (www.spp2080.org), coordinated by Prof. Grunwaldt from Karlsruhe, are planned. The possibility for a PhD thesis is given, based on a part-time engagement.

Responsibilities:

- Synthesis, testing and characterization of novel heterogeneous catalysts for methanol synthesis
- Planning, conducting and evaluation of experiments to study heterogeneous catalysts, especially under dynamic reaction conditions
- Using state of the art spectroscopic methods at synchrotron radiation sources, e.g. X-ray absorption and emission spectroscopy
- Conducting activity, selectivity and long-term stability studies, as well as analysis of product compositions and the structure of the catalyst
- Supervision of bachelor and master students

You hold a very good master's degree in chemistry, chemical engineering, and physics or in a related area. Basic knowledge and experience in physical and technical chemistry, as well as in catalysis are desired. Besides the professional qualification, strong commitment, independent and self-responsible working including fluent verbal and written English skills are expected. German language skills are a plus.

We offer you an attractive and modern workplace with access to the excellent facilities of the KIT, a diverse and responsible job and a wide-ranging offer of advanced training possibilities. Supplementary pension line according to VBL, flexible working time models and support of the JobTicket (BW) are also provided.

We aim for an equal filling of jobs with female and male employees. Therefore, we would be especially glad about applications from women for this position.

If qualified, handicapped applicants will be preferred.

Please apply **online** (<http://www.pse.kit.edu/job/1029/2018>) until **30.07.2018** using the vacancy number **1029/2018** and reference number 8 to Mrs. Wasmus, Personalservice, Karlsruher Institut für Technologie, Campus Süd, Kaiserstraße 12, 76131 Karlsruhe. For Subject-specific information please contact Prof. Dr. Jan-Dierk Grunwaldt, phone +49 721 608 42120 (www.itcp.kit.edu/grunwaldt).

Further information can be found on the internet www.kit.edu.

