

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

**Academic Employee (m/f)**  
**Characterization of novel NH<sub>3</sub>-SCR catalysts under realistic reaction conditions**

The Chair in Chemical Technology and Catalysis ([www.itcp.kit.edu/grunwaldt](http://www.itcp.kit.edu/grunwaldt)) focuses on the design, testing and in-depth characterization of heterogeneous catalysts. Our research embraces exhaust gas catalysis, fine chemistry using innovative solvents and the use of renewable resources. The project is associated with the exhaust gas group that is engaged in understanding and development of conventional and novel exhaust gas catalysts. It is embedded in the "Exhaust Gas Center Karlsruhe", which is equipped with modern test benches and a broad variety of state-of-the-art characterization techniques. It is in particular utilizing cutting-edge synchrotron based techniques that allow the characterization under realistic operation conditions for deriving structure-catalytic activity relationships.

Responsibilities:

- Development of next generation exhaust gas catalysts for SCR of NO<sub>x</sub> with NH<sub>3</sub> by systematic preparation and testing combined with in situ/operando characterization (e.g. operando X-ray absorption/emission spectroscopy, environmental transmission electron microscopy).
- Development and implementation of novel operando spectroscopic measuring cells for X-ray absorption spectroscopy (XAS, XES), modulation excitation spectroscopy (MES) and most recent photon in/out methods
- Work in a multidisciplinary environment, in close collaboration with the group and our external partners. The position will particularly involve the use of synchrotron radiation, therefore you will conduct experiments at world-leading large-scale facilities (e.g. DESY, ESRF, SOLEIL, SLS).
- Supervision of PhDs, bachelor and master students

**You must have** a very good doctoral degree in chemistry, physics, chemical engineering, or in a related area. You have very good knowledge in the fields of zeolite preparation, spectroscopy and exhaust gas after-treatment catalysis. Knowledge and experiences in the application of synchrotron radiation based methods is advantageous. 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** an attractive and modern workplace with access to excellent facilities of KIT, diverse and responsible tasks, a wide scope of advanced training options, supplementary pension with the VBL (Pension Authority for Employees in the Public Service Sector), flexible working time models, a job ticket (BW) allowance, and a cafeteria/canteen.

We prefer to balance the number of female and male employees. Therefore we kindly ask female applicants to apply for this job.

If qualified, handicapped applicants will be preferred.

Please apply **online** (<http://www.pse.kit.edu/job/1071/2018>) until **November 9<sup>th</sup>, 2018** using the vacancy number **1071/2018** and reference number **8**. Personnel Support is provided by Mr. Münch, Personalservice, Karlsruhe Institute of Technology, Campus Süd, Kaiserstraße 12, 76131 Karlsruhe. For subject-specific information please contact Prof. Dr. Jan-Dierk Grunwaldt, phone +49 721/608-42120.



Further details can be found on our website: [www.kit.edu](http://www.kit.edu).