

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** **Material development and spectroscopy on catalytic systems for water electrolysis**

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, especially under dynamic reaction conditions. In the context of the German energy transition (“Energiewende”), we address the topic of storing the electrical energy produced from renewable energies by means of water electrolysis. By using so-called “operando” methods, a detailed understanding of catalysts will be obtained. The project will be processed in close collaboration with university groups from Erlangen and Braunschweig in the framework of the priority program SPP 2080 “Catalysts and reactors under dynamic reaction conditions for energy storage and conversion” ([www.spp2080.org](http://www.spp2080.org)), coordinated by Prof. Grunwaldt from Karlsruhe. The possibility for a PhD thesis is given, based on a part-time engagement.

Responsibilities:

- Synthesis, testing and characterization of novel electrode materials and model electrodes for the oxygen evolution reaction (OER).
- Planning, conducting and evaluation of experiments to investigate the electrocatalysts under reaction conditions by means of state of the art spectroscopic methods, especially at synchrotron radiation sources.
- 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 under electrochemical conditions
- Supervision of bachelor and master students

**You hold** a very good master’s degree in chemistry, chemical engineering, or in a related area. You have very good knowledge in the fields of electrochemistry and/or catalysis. Basic knowledge and experiences in the application of spectroscopic methods are 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 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/1031/2018>) until **30.07.2018** using the vacancy number **1031/2018** and reference number 8 to Mrs. Wasmus, Personalservice, Karlsruher Institute 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](http://www.itcp.kit.edu/grunwaldt)).



Further information can be found on the internet [www.kit.edu](http://www.kit.edu).

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