1 PhD Student Position: New Concepts and Materials in Catalysis

Department Chemie und Pharmazie, Erlangen, TV-L E 13, Vollzeit, Befristete Anstellung, Bewerbungsschluss: 30.06.2026

Aufgaben

The position focuses on in situ and operando studies on real and model catalysts for highly selective (de)functionalization reactions. In particular, the role of catalytic modifiers, additives, and activation procedures will be elucidated to establish structure-property relationships. In situ and operando infrared spectroscopy (DRIFTS, PM-IRAS) will be a key component of the experimental toolbox. Where appropriate, additional techniques such as microscopy methods (scanning tunneling microscopy, atomic force microscopy) may be employed as well.

The successful candidate will design and execute in situ and operando experiments on real and model systems, perform and analyze the related measurements, develop robust data-analysis workflows, collaborate within an interdisciplinary team, present results at conferences, and contribute to manuscripts and student mentoring. We offer a vibrant, international research environment with access to state-of-the-art laboratories and outstanding instrumentation, close interaction with leading synchrotron facilities, and excellent conditions for independent, high-impact research.

Qualifikationen

Notwendige Qualifikationen:

We value flexibility, commitment, communication skills, and the ability to work effectively in a team. Applicants must hold a diploma or master degree chemistry, physics, materials science, or chemical engineering. Expertise in in situ and operando methods is welcomed; however, candidates without direct experience in this field are also encouraged to apply.

Ergänzende Hinweise

The Friedrich-Alexander-Universität Erlangen-Nürnberg FAU (www.fau.eu) ranks among Germany□s leading universities in chemistry research and among the most innovative German universities with an outstanding track record in knowledge transfer (THE Ranking 2023, global number 1 in □industry, innovation, infrastructure□). The Erlangen Center for Interface Research and Catalysis ECRC (www.ecrc.fau.eu) advances cutting-edge research on catalysis and interfaces from basic science to process development. Within this environment, the Libuda Group (www.ecrc.fau.eu/libuda-group) explores complex model interfaces across surface science, electrocatalysis, photochemistry, and in situ/operando methodologies, aiming at mechanistic insight into processes relevant to energy conversion and storage, sustainable chemical production, and advanced materials.

The university promotes gender equality and aims at increasing the fraction of women in science. Handicapped persons are preferred if equally qualified.

Interessiert?

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