

## PhD position (m/f/d) – 403-02/2023 in the area of in-situ spectroscopic and kinetic investigations on liquid-phase catalytic systems

The Leibniz Institute for Catalysis (LIKAT Rostock) with approx. 300 employees and guests is one of the leading European research institutions in the field of catalysis. LIKAT is a competent partner for the research and development of homogeneous and heterogeneous catalysts as well as catalytic processes and technologies. LIKATs focus is on application-oriented basic research and applied research. Therefore, it cooperates with industrial companies and research institutes worldwide.

The research group of Dr. Christoph Kubis and Prof. Evgenii V. Kondratenko in the department of "Advanced Methods for Applied Catalysis" offers a PhD position in this area.

### Your task:

The major task of the PhD student will be to perform in-situ spectroscopic and kinetic investigations on a multistep liquid-phase catalytic process to elucidate relevant mechanistic aspects and to derive corresponding kinetic models. A multispectral approach with in-situ FTIR and Raman spectroscopy in combination with chromatographic methods will be used for online reaction monitoring. Real-time acquisition of analytical data and their evaluation by chemometric methods will represent the input-information for a data-driven process control. The project is embedded in the DFG Research Unit "Multistep Catalytic Production Systems for Fine Chemistry by Integrated Molecular, Material and Process Design" (IMPD4Cat).

### Your competence:

The candidate should have a Master's degree in chemistry or chemical engineering with a substantial background in catalysis, technical chemistry or physical chemistry and preferentially has some relevant experience with spectroscopic and chromatographic techniques. Further requirements are good proficiency in written/spoken English and profound computer skills (e.g. Origin, Matlab, Python, LabView).

**Our offer:** We offer a challenging PhD position in an excellent, international environment at the LIKAT Rostock. The position is available from January 1, 2024 and limited to 4 years. Place of work is Rostock. The salary is based on public service rates of the German states (E13 TV-L, 66%).

LIKAT supports professional equality of women and men and so applications from women are most welcome. In areas where women are underrepresented at LIKAT preference will be given to women with equal qualification. Disabled applicants with equal qualification and aptitude will be given preferential consideration.

Please, send your application (including C.V., list of publications, copies of relevant examination certificates and names contact information of two referees) as an e-mail (**in one pdf file with a max. size of 25 MB**) by e-mail quoting the reference number **403-02/2023** to **bewerbungen@catalysis.de** until **November 25, 2023**.

For topic related questions, please contact Dr. Christoph Kubis, Group leader "Optical Spectroscopy and Thermoanalytical Methods " ([christoph.kubis@catalysis.de](mailto:christoph.kubis@catalysis.de)) directly.

Please note that application and travel costs cannot be reimbursed.