

New junior research group in the field of chemical catalysis at the TU Berlin and in UniSysCat

Start Time: Friday, May 29, 2020

End Time:



UniSysCat welcomes Franziska Hess, who is appointed as junior professor for chemical catalysis at TU Berlin since April 2020, at the Institute of Chemistry. With her expertise, she will strengthen the research in area A and D of the cluster.

Her area of work lies in the modeling of heterogeneous catalysts and catalyst stability. She completed her dissertation on “DFT-based Kinetic Monte Carlo Simulations of oxidation reactions over the RuO_2 (110) model catalyst surface” in 2015 under the supervision of Herbert Over at the Institute for Physical Chemistry at Justus Liebig University Giessen. Subsequently, she worked with Bilge Yildiz's group at the Massachusetts Institute of Technology to investigate the driving force of the degradation of cathode materials in solid oxide fuel cells. In 2019 she received funding from the Liebig scholarship from the Fund of the Chemical Industry, which enabled her to deepen her research at RWTH Aachen University in the field of modeling catalyst stability. The goal of her research is to develop theoretical models for the long-term stability of catalyst systems and suitable descriptors that are able to predict catalysts that are both active and stable. Another focus is the optimization of existing simulation methods for chemical kinetics by taking into account the influence of lateral interactions between adsorbed molecules.