

Bridging Chemistry and Reaction Engineering For Sustainable Technologies

Worldwide, chemists are facing tremendous challenges in satisfying an ever increasing demand for chemicals and energy. Catalysis as an enabling technology for the sustainable, large-scale synthesis of chemicals and the production of energy has changed the world significantly. Improving the performance of existing systems, and/or enabling more sustainable reactions, which were hitherto unknown, or unfeasible on a technical scale, can have a significant impact.

Within my research group, we unravel complex catalytic systems to their elementary reaction steps, in order to identify the rate- and selectivity-determining step(s). To do so, we use various experimental and computational tools. Subsequently, we aim to put the mechanistic pieces together in order to optimize the macroscopic performance, either through improved reaction engineering or catalyst design. During the lecture, this multidisciplinary approach will be illustrated by case studies from both homogeneous and heterogeneous catalysis.

12-12-12

3:30 pm

1315 Chemistry

Special Seminar



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