

UniCat Colloquium

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Lecturer: **Prof. Ive Hermans**, Department of Chemistry,
Department of Chemical and Biological Engineering,
University of Wisconsin – Madison, USA

Title: **Catalysis Research at the Interface of Chemistry
and Chemical Engineering**

Abstract: Alternative pathways for chemical processes that require less energy and obtain the desired products with higher (space-time-)yield have always been industrial targets, due to the associated economic benefits. However, the drive toward green and sustainable synthesis of chemicals and fuels, has turned this reconceptualization of the industrial processes into a rational goal, creating exciting opportunities for catalysis research.

Within my research group, we unravel catalytic systems of (potential) industrial relevance to their elementary reactions, in order to identify the rate- and selectivity-determining step(s). To do so, we use various experimental and computational tools, ranging from chemical kinetics to (*in situ*) spectroscopy. Challenge is then to put the mechanistic insights together in order to optimize the macroscopic performance, either through improved reaction engineering or catalyst synthesis. During the lecture, this approach will be illustrated by some recent case studies from our group, focusing on selective hydrocarbon oxidations.

Find more about Prof. Hermans on: <http://www.chem.wisc.edu/users/hermans>
or: <http://www.hermans.ethz.ch/about/index>

Date: **Wednesday, February 5th, 2014**

Time: **5:15 pm - around 6:45 pm**

Location: **TU Berlin, Department of Chemistry
Straße des 17. Juni 115, 10623 Berlin
Building C, Lecture Hall C 264**

Organizer: **Prof. Helmut Schwarz (TUB)**

Coffee and tea will be served thirty minutes prior to the lecture start.
Guests are cordially invited to attend!

Prof. Dr. Matthias Driess, Chair of the Cluster of Excellence UniCat