

UniCat Colloquium

DR. THIBAUT CANTAT

IRAMIS Institute, CEA, Saclay/France

Activation and catalytic conversion of CO₂ and SO₂ with molecular compounds

While greenhouse gases emissions are reaching alarming levels, fossil fuels still represent 80% of the world energy portfolio and 95% of our chemical commodities rely on non-renewable resources, namely hydrocarbons. In this context, utilizing CO₂ as a C1 building block to produce platform chemicals as an alternative to petrochemistry has a double advantage of reusing CO₂ while sparing fossil resources and avoiding CO₂ emissions from their use.

We have developed a strategy relying on the simultaneous use of a functionalizing reagent and a reductant that can be independently adjusted to perform the reductive functionalization of CO₂. The so-called diagonal approach will be discussed and exemplified with novel catalytic processes to convert CO₂ to formamides, N-heterocycles, methylamines and methanol, using hydroboranes, hydrosilanes or formic acid as reductants. Extension of this methodology to SO₂ enables the facile conversion of this gas to sulfones, under metal-free conditions.

Wednesday, April 19, 2017 at 5:15 PM

TU Berlin, Institute of Chemistry
Straße des 17. Juni 115, 10623 Berlin

Building C, Lecture Hall **C 264**

Prof. Dr. Oestreich (TUB)

Organizer

Coffee and cake will be served 30 minutes before the lecture. Guests are cordially invited to attend!
Prof. Dr. Matthias Driess - Chair of the Cluster of Excellence UniCat - www.unicat.tu-berlin.de

