UniSysCat Colloquium

Prof. Dr. Swadhin Mandal

Indian Institute of Science Education and Research, Kolkata

Start Time: Friday, July 12, 2019 04:00 pm

End Time: Friday, July 12, 2019 05:30 pm

Chemistry Building, C264
Technische Universität Berlin, Straße des 17. Juni 115, 10623 Berlin

Organic Spin Materials: Mimicking Transition Metals during Catalysis

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Today's major concerns on the industrially used catalytic systems have been: i) high expense of catalysts; ii) toxicity of transition metals; iii) difficulties in removal of trace amounts of toxic-metal residues from desired product; and finally iv) the large consumption of heavier and rare transition metals which do not meet the requirement of sustainable development. In this regard, the development of environmentally benign cost-effective catalysts is ideal. Naturally, the most recent trend in catalyst development heralded a new era using either earth-abundant, nontoxic, and inexpensive metals or metal-free catalysis.

This talk will discuss our recent developments on this concept on how systematically one can mimic the transition metal based catalysis avoiding any transition metals. The emphasis will be given on how we came up with the development of a new concept in catalysis, which was primarily triggered by an entirely different discipline of material science and spin electronics.

Prof. Dr. Matthias Drieß (TU Berlin)

Organizer