



Vortragsankündigung

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Es spricht: **Dr. Kallol Ray, Institute for Chemistry,
Humboldt University Berlin**

Zeit: **Mittwoch, 29. April 2009 17:15 Uhr**

Ort: **HU Berlin
Institut für Chemie, Walther Nernst-Haus
Newtonstraße 14, 12489 Berlin
Hörsaal 0'06**

Thema: **Exploring the Chemistry of Nature:
A Combined Experimental and Theoretical
Approach.**

Abstract: The development of processes for selective hydrocarbon oxidation is a goal that has long been pursued. An additional challenge is to make such processes environmentally friendly, for example by using non-toxic reagents and energy-efficient catalytic methods. Excellent examples are naturally occurring metalloenzymes, which are, however, not suited for large-scale industrial applications. Alternatively, the design of biologically inspired hydrocarbon oxidation catalysts may hold a great promise for wide-ranging synthetic applications. Successful design of such small-molecule inorganic catalysts will require a proper understanding of the key chemical principles that underlie the efficacy of the bio-enzymes as catalysts for aerobic oxidations. In this talk I will try to summarize some of the experimental and theoretical approaches that I have undertaken or plan to undertake in order to better understand the electronic structures of the active sites of a number of monooxygenase and oxidase enzymes. Such studies may in turn provide vital insights into the prerequisites necessary for the design of efficient catalysts for the oxidation of organic substrates.

Organisator: **Prof. Dr. Christian Limberg (HUB)**

Gäste sind herzlich willkommen!

Prof. Dr. Matthias Drieß
Sprecher des Exzellenz-Clusters UniCat