



Vortragsankündigung

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Es spricht: **Prof. Dr. Ally Aukauloo**, Laboratoire de Chimie Inorganique, Institut de Chimie Moléculaire et des Matériaux d'Orsay, Université Paris Sud XI, France

Zeit: **Mittwoch, 10. Juni 2009 17:15 Uhr**

Ort: **TU Berlin**
Institut für Chemie, Altes Chemiegebäude
Straße des 17. Juni 115
10623 Berlin
Raum C 243

Thema: **Towards the light driven synthesis of a fuel**

Abstract: The water oxidizing enzyme of photosynthesis is the only catalyst known that can do this reaction in an energetically efficient way (i.e. with a small over-potential). A chemical catalyst that shares this property could greatly improve the efficiency of water electrolysis and photolysis. There is therefore great interest in understanding the mechanism of this enzyme (and enzymes that catalyse the reverse reaction) and in reproducing aspects of its function in artificial systems. A similar interest exists in producing artificial proton-reducing systems to replace platinum as a catalyst in the current electrochemical systems for H₂ production. Such new catalysts could also help improve the efficiency of fuel cells. In addition, bioinspired photochemical and electrochemical catalysts could well contribute to energy efficient synthesis of other high value chemicals and fuels. The recent improved understanding of the water oxidizing enzyme and of hydrogenases has made research in this area much more realistic than even in the recent past. Improvements in inorganic chemistry, photochemistry and nanotechnology all contribute to making research in this area timely. I will discuss about our recent results in using water and light to perform an oxidation reaction and in the development of non-noble metal electrocatalysts for the hydrogen formation reaction.

Organisator: Prof. Dr. Holger Dau (FUB)

Gäste sind herzlich willkommen!

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