unicat
Unifying Concepts in Catalysis

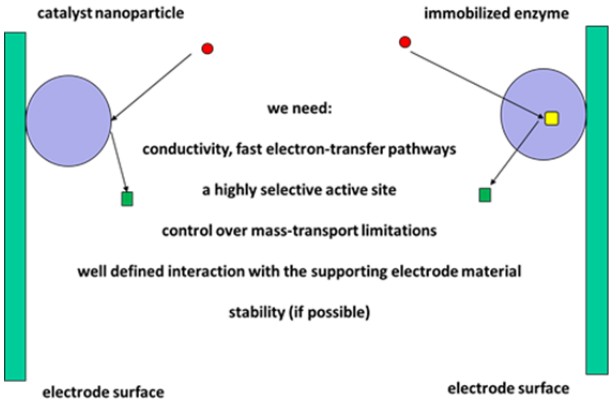
UniCat Colloquium

PROF. DR. WOLFGANG SCHUHMANN

Lehrstuhl für Analytische Chemie, Ruhr-Universität Bochum

Electrocatalysis and bioelectrocatalysis - distinction without a difference

Nature's subtle systems drive essential reactions responsible for sustenance of our existence "reactions of life" through sophisticated mechanisms of charge transfer, energy harvest and conversion. The interconnectedness between living nature and technologically relevant electrochemical reactions, for example, oxygen reduction and evolution catalyzed by cytochrome c oxidases and photosystem II respectively, and hydrogen oxidation and evolution catalyzed by hydrogenases, does not only intrigue but also inspires us.



To what extent therefore can our present understanding of electrocatalysis guide us to decipher nature's sophistication, or rather, can bioinspired electrocatalysis succeed to replicate and supersede nature's per-fection "the exemplar paragon"? A harmonized perspective of the principle factors which govern electrocatalysis and bioelectrocatalysis featuring examples of technologically important electrochemical reactions catalyzed by both enzymes and inorganic electrocatalysts are presented. Sound knowledge of the inter-relationships linking electrocatalysis and bioelectrocatalysis is essential for enabling a deeper understanding of nature's bioelectrochemical reactions, and for insightful design of functional catalysts inspired by models from living nature.

Wednesday, January 18, 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. Wollenberger (UP)
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