

Séminaire Labex ARCANE

Mardi 28/06/2016 - 14h à 16h30

Amphi André RASSAT, UFR Chimie-Biologie

Programme :

14h – 15h **“Selectivity in CO₂ Reduction by Low Valent Iron Porphyrin Complexes”**
Prof. Abhishek DEY
 Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Kolkata, India.

An iron porphyrin complex with a proton transfer motif in its distal side is found to reduce CO₂ to CO as well as formic acid selectively under different experimental conditions. The selectivity is governed by relative binding affinity of the reduced Fe center towards CO₂ and H⁺ which in turn can be tuned by utilizing the distal functional groups. Resonance Raman spectroscopy and electrochemical techniques are used to elucidate the reaction mechanism. In particular, the role of different intermediates in governing the selectivity will be illustrated.



Presentation of Abhishek Dey

He did his B. Sc. from Presidency College (1996-1999). He was a student of the M.Sc. program of IIT Kanpur from 1999-2001. He obtained his PhD from Stanford University in 2007 with Prof. Edward I. Solomon. After two years of postdoctoral work with Prof. James P. Collman he joined IACS in June 2009 as an Assistant Professor. He is the recipient of Stanford graduate fellowship, American chemical society young investigator award and young investigator award from the society of porphyrin and phthalocyanine. He is currently serving as Editorial board member of Inorganic Chemistry, Journal of Biological Inorganic Chemistry, Chemical Communications and ACS Catalysis.

Research interests :

His research area involves development of catalysts for a sustainable energy system utilizing the structure function correlations established in naturally occurring metallo-enzymes.

15h Pause

15h30 – 16h **“ Oxygen Reduction Reaction by multicopper enzymes at nanostructured electrodes of enzymatic fuel cells”**

Alan LE GOFF

Equipe Biosystèmes Electrochimiques et Analytiques, Département de Chimie Moléculaire

16h – 16h30 **“Nickel centred proton reduction catalysis in a model of [NiFe] Hydrogenase”**

Carole DUBOC

Equipe de Chimie Inorganique REdox, Département de Chimie Moléculaire