DIPARTIMENTO DI CHIMICA

SAPIENZA
UNIVERSITÀ DI ROMA

Roma, 30 luglio 2015

Al Direttore
Del Dipartimento di Chimica
Prof. Aldo Laganà

OGGETTO: *Richiesta di Seminario di Dipartimento*

Relatore :

Prof.ssa **Olivia Reinaud**, Group of Supramolecular Bioinorganic Chemistry, Laboratoire de Chimie et Biochimie Toxicologiques et Pharmacologiques, CNRS UMR 8601, Université Paris Descartes, Paris

Titolo

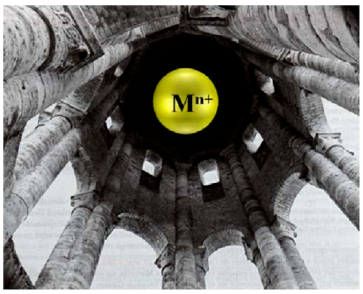
Metals in Biomimetic Cavities: From Metallo-Biosite Modeling to Molecular Recognition

Data e Aula Proposta

Venerdì 4 Settembre, Aula Parravano, ore 15:30

Abstract:
Supramolecular chemistry concerns the reversible assembly of discrete entities through the establishment of multiple weak interactions between the different components. As these phenomena are fundamental in the biological world, Nature has been a major source of inspiration for chemists involved in the supramolecular field. Biomimetic inorganic chemistry is mainly focused on mimicking the first sphere coordination environment of the metal ion. Little information is available concerning the influence, or even the control, that the microenvironment provided by a protein can have on the reactivity of the metal. Exploration of this aspect through the construction of cavity-based complexes will be presented and discussed. Hence, the concepts of "funnel" complex and "bowl" complex will be illustrated by selected examples that gave rise to:

- The elaboration of receptors that are highly selective for neutral molecules and efficient even in the highly competitive medium, which is water,
- A new proposed mechanism for copper monooxygenases,
- The design of systems allowing the control of hetero-multinuclear binding of metal ions,
- A biomimetic strategy for the selective functionalization of a cavity: Guest Covalent Capture by a Host.



Cordiali saluti.

Prof Antonella Dalla Cort