



The supervisory board of the Kestcells Project announces the Seminar AMU-03:

“Supramolecular Photochemistry: from basic concepts to energy conversion”

Dates: 26th of June, 2014.

Place: AMU, CINaM – Campus de Luminy - Salle Raymond Kern, Marseille, France

Program

Time	Subject	Speaker
16:00 – 17:30	Supramolecular Photochemistry: from basic concepts to energy conversion.	Giacomo Bergamini
Department of Chemistry "G. Ciamician", University of Bologna ; Interuniversity Research Centre for the Chemical Conversion of Solar Energy, and Center for Nano Science and Technology @Polimi, Italian Institute of Technology (IIT), Milano		

Summary

In Nature, photons are exploited as energy (e.g., in the photosynthetic process) and elements of information (e.g., in vision). In the last years, light has also been extensively used in artificial systems at the nanometer scale for energy conversion and information processing. It has been shown that, by assembling suitable molecular components, it is possible to construct molecular-level devices and machines in which light provides the energy needed for performing and/or the signal necessary for monitoring desired functions. The type and utility of the light-related functions depend on the degree of organization of the chemical systems that make use of photons. The lecture will be a tour in the photochemistry, photophysics and electrochemistry of several molecular and supramolecular systems, carried out in the last years. In particular, the experimental studies on mono- and polynuclear complexes of transition metals and lanthanide ions, multichromophoric systems, dendrimers, nanoparticles, and molecular machines have been done in order to develop luminescent sensors for metal ions with signal amplification, smart emitting materials, molecular light-harvesting antennae to absorb and funnel solar radiation, light driven host-guest systems, metal nanoparticle synthesis, multi-ligands for the construction of 2D and 3D supramolecular polymers, organic emitting fibers and systems for solar energy conversion.