



SCUOLA
NORMALE
SUPERIORE

Colloqui della Classe di Scienze

mercoledì 19 gennaio 2011

ore 15.00

Scuola Normale Superiore

Pisa

(Sala degli Stemmi)

Vincenzo Balzani

Università degli Studi di Bologna

Terrà un seminario dal titolo:

“Photochemically Controlled Molecular Devices and Machines”

Abstract:

The macroscopic concepts of a device and a machine can be extended to the molecular level. Molecular-level devices and machines operate via electronic and/or nuclear rearrangements and, like macroscopic devices and machines, they need energy to operate and signals to communicate with the operator. The extension of the concepts of a device and a machine to the molecular level is of interest not only for basic research, but also for the growth of nanoscience and the development of nanotechnology. Currently there is an increasing interest in the use of light to power molecular devices and machines. The lecture will illustrate examples of recent achievements [1,2,3], which include molecular wires, switches, plug-socket systems, extension cables, antennas, logic gates, memories and light powered nanomotors.

[1] V. Balzani, A. Credi, M. Venturi: "*Molecular Devices and Machines. Concepts and Perspectives for the Nanoworld*", Wiley-VCH, **2008**.

[2] A. Credi, M. Venturi, V. Balzani: "Light on molecular machines", *ChemPhysChem*, **11**, 3398-3404 (**2010**).

[3] V. Balzani, A. Credi, M. Venturi "Molecular Machines Based on Rotaxanes and Catenanes" in *Proceedings of the Solvay Conference* (Ed. J-P Sauvage, P. Gaspard), Wiley-VCH, 159-212 (**2011**)

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze