Ph.D. Course in Materials Science and Nanotechnology

University of Milano-Bicocca, Department of Materials Science, via Cozzi 55, 20125 Milano

➢ May 13, 2019 – 10.30 a.m.
Building U3 - room U3-06

Josef Michl

Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague and Departments of Chemistry and of Physics, University of Colorado, Boulder, Colorado, United States

Arrays of Dipolar Molecular Rotors

We shall describe the current state of efforts to prepare regular two-dimensional triangular arrays of electrostatically interacting artificial dipolar molecular rotors, to establish their exact structure by X-ray diffraction and various spectroscopic tools, and to detect collective behavior.

Related efforts to prepare thin-layer three-dimensional analogs will also be described. Two types of two-dimensional arrays are under investigation:

(i) surface inclusions of rotors as guests partially inserted into hexagonal channels in a host solid, with dipolar rotators outside, and

(ii) LB monolayers composed of rotors that carry two axial triptycenes with a dipolar rotator between them. Triptycenes on neighboring rotors interlock to form two decks and keep the dipolar rotators in the center. The pros and cons of the two approaches will be compared.

➢ May 14, 2019 – 10.30 a.m.
Building U1 - room U1-11

Marco Morbidini

Kilburn & Strode LLP - European and UK Patent and Trade Mark Attorneys, London

Basics of Intellectual Property and a Patent Case Study

The lecture introduces various forms of Intellectual Property Rights such as patents, utility models, designs, trade marks, copyright, trade secrets & know-how, with particular emphasis on patents as a tool of particular relevance to scientists and engineers. A contentious (ongoing or adjudicated) patent case - if possible relating to the technical area of Materials Science and/or Nanotechnologies - developed before a patent office or a court of justice, will then be studied.