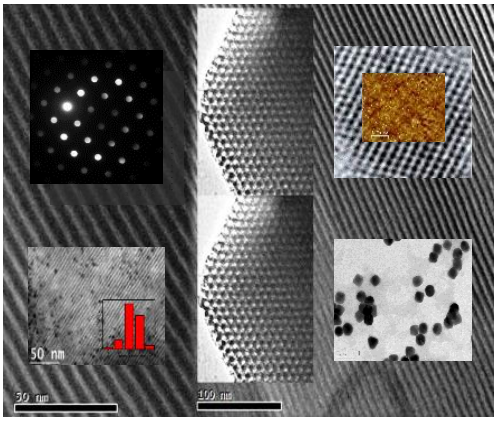
Nanomaterials: Size- and Shape-Dependent Phenomena – Advances in Catalysis and Energy Materials Applications

Overview

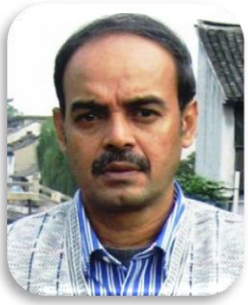


During their minute size below 100 nm in at least one dimension, nanomaterials have properties quite different from materials of the same chemical composition but of macroscopic size. These size-dependent properties relate to colour, melting point, electronic and magnetic properties, chemical bond formation, surface hydrophilicity/hydrophobicity, catalysis, and many more. Controlling the size permits tuning these properties in a large range and has led to important new developments in materials science, comparable to a third dimension of the periodic table.The course aims at an understanding of the fundamentals of the size-dependence of materials properties, to learn how to synthesize these materials and how to apply them in the areas of energy materials and catalysis.

Dates	**November 14-23, 2016**
Host Institute	**Indian Institute of Technology-Madras**
No. of Credits	**2 (28 lecture hours)**
No. of Participants	**Limited to 40**
Who ShouldAttend	**Undergraduate, Post-graduate or Research Students of both Science and Engineering streams as well as from Industry**
Course Registration Fee	**Participants from IIT-Madras or other approved Institutes of GIAN** ***Students :*** **Rs. 2,000;** ***Faculty :*** **Rs.6,000** **Government Research Organization Participants: Rs.10,000** **Industry Participants: Rs. 20,000**
Mode of Payment	**Demand draft in favour of "Registrar, IIT-Madras" payable at Chennai** *(The participants are required to send the Demand Draft for the registration fee to the Course Coordinator).*
Accommodation	The participants may be provided with hostel accommodation, depending on the availability, on payment basis. Request for hostel accommodation may be submitted through the link: http://hosteldine.iitm.ac.in/iitmhostel

Course Faculty

Professor Emil Roduner studied chemistry at the University of Zürich and obtained M.Sc. (Chemistry) at the Rensselaer Polytechnic Institute in Troy, New York, USA. Back in Zürich, Switzerland, he got involved in muonium chemistry. For this work he was awarded the Werner Prize by the Swiss Chemical Society (1988). In 1995 he accepted a Chair of Physical Chemistry at the University of Stuttgart. After his formal retirement he accepted a part-time professorship at the University of Pretoria in South Africa.For details see link:
http://www.ipc.uni-stuttgart.de/AGRoduner/



Dr. Parasuraman Selvam is a Professor in the Department of Chemistry and National Centre for Catalysis Research, IIT-Madras; Adjunct Professor, New Industry Creation Hatchery Center, Tohoku University, Sendai, Japan. Earlier, Professor Selvam was a Faculty at IIT-Bombay. His research interests include nanostructured materials and heterogeneous catalysis for green chemical routes, environmental remediation processes, and energy conversion (biomass, solar hydrogen) and storage (hydrogen, fuel cell, lithium battery) methods. For details see link:
http://chem.iitm.ac.in/faculty/selvam/

Course Coordinator

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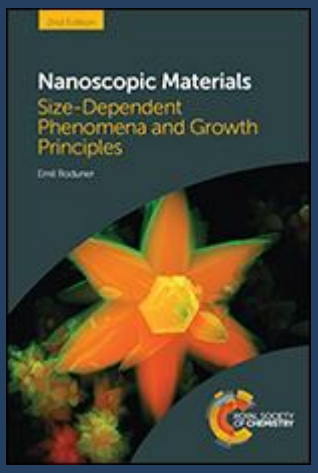
URL: http://chem.iitm.ac.in/faculty/selvam/



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