

COURSE OBJECTIVE

Bulk materials when reduced to nanoscale exhibit unique chemical and physical properties. Nanotechnology involves manipulation of materials through control of matter on the nanoscale to fabricate devices, and systems. Several analytical and fabrication techniques has emerged with the revolution in nano-science and technology. Nanotechnology provides efficient ways to capture, store, and transfer energy. With the increased need of skilled manpower, a two weeks training programme is designed on energy applications of nanotechnology. It offers an introduction to science and technology of nanomaterials, and devices, its fabrication, and characterization for energy applications.

This course is meant for researchers; engineers, and scientists from industries, government agencies, and academic institutions; and entrepreneurs interested in Energy applications of Nanotechnology.

ABOUT IIT BOMBAY & DESE

The Indian Institute of Technology Bombay is one of the premier technological institutes in India with students and faculty who are comparable with the best in the world. The institute has a vibrant research culture, and has several linkages with Indian, and international industries and institutes.

Department of Energy Science and Engineering (DESE) is a department in IIT Bombay with a mission to develop sustainable energy systems and solutions for the future. Apart from the post-graduate programmes of M. Tech., Ph. D., and M. Sc. - Ph. D., the DESE faculty have been actively involved in organizing training programmes in the field of renewable energy, energy efficiency, and energy conservation. DESE currently has about 30 M. Tech's and Ph. D.s graduating annually.

COURSE CONTENTS

- Nanotechnology Fundamentals
- Fabrication Techniques
- Characterizations

- Applications
- Nano materials in solar PV
- Materials for Hydrogen storage
- Fuel Cells
- Batteries
- Super capacitors
- Organic Light Emitting Diodes
- Quantum Dots & Band Gap Materials
- Demonstrations and Laboratory expts.
- Laboratory visits
- Neighbouring Research Institute visits

COURSE FEE

Per participant

- Rs. 18,000 from industry
- Rs. 10,000 from Academic institutions
- Rs. 3,000 for student participants

The demand draft should be drawn in favour of **"The Registrar, IIT Bombay-CEP Account"** payable at Mumbai.

No income tax is to be deducted at source from the course fee, as IIT Bombay is exempt from the same. The course fee includes course material, lunch, and coffee/tea.

ACCOMMODATION

Accommodation (during the course) for participants attending the course at IIT Bombay will be arranged in the Van Vihar guest house for a limited number of participants on advance request. Accommodation charges are not included in the course fee, and should be paid directly by the participant.

Address all communication to:

Prof. Manoj Neergat

Tel. : +91-22-2576 7893 / 2576 7890

Fax : +91-22-2572 6875, 2576 4890

Email : nmanoj [AT] iitb.ac.in

Prof. Pratibha Sharma

Tel. : +91-22-2576 7898 / 2576 7890

Fax : +91-22-2572 6875, 2576 4890

Email : pratibha_sharma [AT] iitb.ac.in

Department of Energy Science and Engineering,
Indian Institute of Technology Bombay
Powai, Mumbai - 400 076

Visit : www.es.e.iitb.ac.in/

PROGRAMME VENUE

The programme will be held at the Seminar Hall (Second Floor), Van Vihar Guest House, IIT Bombay on December 1st - 12th, 2008.

REGISTRATION

The participants should send registration forms duly filled along with the demand draft for the course fee to address given below on or before July 31, 2008.

**Last date for receipt of registration forms:
July 31, 2008**

For information on other Continuing Education Programmes at IIT B, contact:

PROF-IN-CHARGE (CEP)
OFFICE OF CONTINUING EDUCATION
PROGRAMME (CEP),
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY,
POWAI, MUMBAI - 400 076.
TEL. NO. : 022-2576 7060, 2572 6199
FAX : 2572 3480
Email : cep@admin.iitb.ac.in

For latest information on CEP, please visit our home page at : <http://www.iitb.ac.in/~cep/>

Two - Weeks INTERNATIONAL TRAINING PROGRAMME

ON

NANOTECHNOLOGY FOR ENERGY APPLICATIONS

1ST -12th December, 2008



Organised by

**DEPARTMENT OF ENERGY
SCIENCE AND ENGINEERING**

Office of

Continuing Education Programme

Indian Institute of Technology Bombay

Mumbai – 400076, India

R E G I S T R A T I O N F O R M

International Training Programme on
Nanotechnology for Energy

Applications

December 1 – 12, 2008

Name(print): _____

Gender: Male / Female

Designation: _____

Organisation: _____

MailingAddress: _____

_____ Pin _____

Telephone: _____ (O) _____ (R)

Fax: _____ Mobile: _____

Email: _____

Qualifications: _____ Experience: _____ yrs

IIT Guest House accommodation required?

YES / NO

Payment: DD.No. _____ Dt. _____

Rs. _____

[Demand draft should be drawn in
favour of “The Registrar, IIT Bombay
(CEP A/c)”]

Date:

Signature of
Applicant

(XEROX ADDITIONAL COPIES OF THIS FORM, IF NEEDED)

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Qualifications: _____ Experience: _____ yrs

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NO

Payment: DD.No. _____ Dt. _____

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