CTNT-09 CONCEPT:

Nanoscience is an important new area of research that explores materials and novel phenomena that occur at the size scale ranging from 1-100 nanometer, a range that encompasses both the smallest artificial structures and ubiquitous molecules of the natural world. New fundamental phenomena such as the chemical synthesis of nanoparticles, novel electronic devices based on single electron dynamics, the interaction of cells with nano-patterned surfaces, and the unfolding of proteins define the intellectual driving force of this field. At the same time, the technological driving force consists in potential applications of nanodevices in both medicine and engineering; these applications include novel devices and structures for computation, local drug delivery, and ultradense computer memory.

The challenges presented by nanoscience cannot be answered solely by techniques and methods derived from a single science or technology discipline. Instead, it requires a combination of diverse, but inter-related techniques spanning many disciplines that form the core of an emerging discipline of Nanoscience. These include, but are not limited to, quantum physics, synthetic chemistry, density-functional simulation methods, biological and chemical self-assembly, semiconductor device processing methods, and a whole array of microscopies. Potential applications at this scale may well provide for unprecedented benefits, but will require an even more diverse set of methodologies, especially for applications in medicine and electronics.

World has experienced the semiconductor revolution in the form of wonderful electronics devices in faster and cheaper communication, faster and quicker computers, entertainment devices, medical surgery, characterization and testing, sensors, photography, space exploration etc. to name a few. In recent years nanotechnology has emerged as one of the most important and exciting forefront fields in science, engineering, energy, biotechnology, chemical technology, materials etc. It shows great promise for providing us in the near future with many breakthroughs that will change the direction of technological advances in a wide range of applications. Richard Feynman, the Nobel Laureate had described in 1960, “There is Plenty of Room at the Bottom”.

In the most of all this buzz and activity, nanotechnology has moved from the world of the future to the world of the present. There is no shortage of opinions on where nanotechnology can go and what it can mean, but both pundits and critics agree on one point and that is this science and its spin-off technologies have the potential to affect the quality of human life on this globe.

The aim of the present symposium is to provide an introduction and awareness of the Nanotechnology and its possible present and future technological and other challenges.

Broad Topics to be covered

1. Basics of Nano Science & Technology
2. Nano Scale materials
3. Computational Nano Science
4. Nano electronics and ICT
5. Nano Photonics
6. Nano Threats
7. Organic compounds and polymers
8. Nano Sensors
9. Nano-Biotechnology and Biomaterials
10. Nano Challenges
11. Novel applications of nanodevcices
12. Experimental techniques
13. Functionalities & properties at nano scale

Key Speakers

Dr. Max Migliorato, University of Manchester, UK
Dr. T. K. Bhattacharya, IIT, Kharagpur
Dr. M. Jagadesh Kumar, IIT Delhi
Dr. B. R. Mehta, IIT Delhi
Dr. G. Bose, IIT Delhi
Dr. V. R. Rao, IIT Bombay
Industry participation is also expected during the symposium.

Abstract Submission:

The main text of the abstract should be in Times font, 11 or 12 pt fonts, single spaced, 1 in (2.5 cm) margins. Content of the abstract should not exceed more than 250 words. Title is bold, 13 pt Times type. Abstract may include black and white figures and references if desired. Main text should be justified. Title and authors are left justified. Author affiliation and contact details should be italicized. Abstracts should be submitted as single MS Word .DOC (document) or .RTF (rich-text format) files as an Email attachment to cntl@iiitm.ac.in Please check to see that your file prints to your satisfaction before submission.

Best Poster Award:

A poster (1m X 1m) contest has been planned on the above mentioned themes/related areas on 15th Jan 2009. Two best posters will be selected by the experts for the award.

Address for Correspondence

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ABV-IIITM, GWALIOR:

Atal Bihari Vajpayee - Indian Institute of Information Technology & Management (ABV-IIITM), a Deemed University, is an apex IT and Management Institute, established by the ministry of HRD, Government of India in 1998 situated at Gwalior - Agra Road. ABV-IIITM Gwalior is the foremost institution providing Technical and Managerial Education in the areas of Information Technology and Management, in India. The only institution of its kind in India, IIITM is at the vanguard of imparting superior quality higher education and pertinent skills.

ELIGIBILTY:

The course is open to the students as well as faculty members from all science and engineering discipline courses running in government / private institutions.

IMPORTANT DATES:

Deadline for Abstract Submission: **10-01-2009**
Intimation of acceptance: **12-01-2009**
Deadline Registration**: 13-01-2009**

REGISTRATION:

Registration form in the prescribed format duly signed by the candidate and verified by the head of the institution must reach the coordinators by email or post on or before 13-01-2009. However, candidates are encouraged to register online at cntl.iiitm.ac.in. Registration Fee can be deposited on 15th Jan 2009 from 9:00AM-10AM at registration desk of CTNT-09.

Registration Fee:

Faculty	**Rs. 500**
Student	**Rs. 350**
Industry	**Rs. 1000**

Registration Form

Symposium on
Current Trends in Nano Science & Technology (CTNT-09)
15th - 16th Jan, 2009

1. Name of the applicant:
   ……
2. Designation ……
3. Name of the institute where employed/studying:
   ……
   ……
4. Name of the Deptt:……
5. Official mailing address:……
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   ……
   ……
6. Telephone No……
7. Mobile No……
8. Email……
9. Academic Qualification:……
10. Specialization:……
11. Presenting Poster Yes☐ if not No ☐
12. Title of Poster:
    ……
    ……
13. Accommodation can be arranged on payment basis in Institute itself. If accommodation required tick Yes ☐ if not No ☐

Signature of the Applicant

Symposium on

Current Trends in Nano Science & Technology (CTNT-09)

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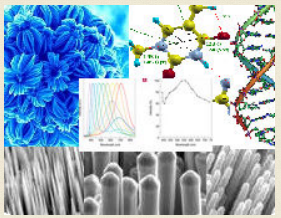

For Faculty & Students of Science & Engineering

Patron

Prof. S.G. Deshmukh
Director, ABV-IIITM, Gwalior

Coordinators

Dr. Pankaj Srivastava
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