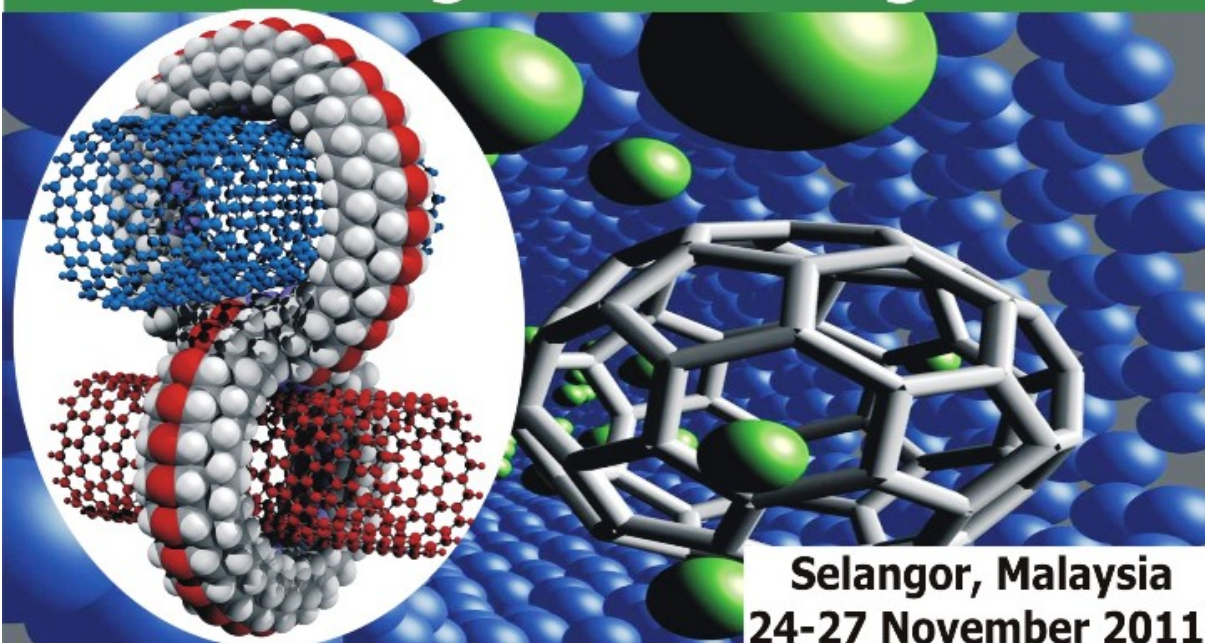


International Workshop on  
**NANOTECHNOLOGY**  
in the Edge of Convergence



**Selangor, Malaysia  
24-27 November 2011**



**Centre for Science & Technology of the Non-Aligned and  
Other Developing Countries (NAM S&T Centre),  
New Delhi, India**



**The Commission on Science and Technology for  
Sustainable Development in the South (COMSATS),  
Islamabad, Pakistan**



**The Institute of Microengineering and Nanoelectronics (IMEN),  
Universiti Kebangsaan Malaysia (UKM),  
Selangor, Malaysia**

Sponsored by:



**The United Nations Educational, Scientific  
and Cultural Organization (UNESCO)**

## **1. Introduction**

Nanotechnology, which is the study of manipulating matter on atomic and molecular scales, involves developing materials or devices possessing at least one dimension sized from 1 to 100 nanometers. This field of science has gathered enormous significance in recent years and tremendous advancements have been made with a variety of applications in a range of fields of science and technology, including materials sciences, surface science, organic chemistry, molecular biology, semiconductor physics, microfabrication, electronics, energy, medicine, etc. Nanotechnology has the potential to create many new materials and devices and it possibly holds solutions to world's problems related to water, agriculture, nutrition, health and energy.

For developing countries, nanotechnology provides a new focus for research through its aim to manufacture from the 'bottom-up' approach using techniques and tools being developed today to make complete, high performance products, showing its potentiality in the form of improved water purification systems, energy systems, healthcare, food production and communications, etc. However, nanotechnology has raised some concerns and speculation about the toxicity and environmental impact of nanomaterials, and their potential effects on global economics. These issues have led to a debate among advocacy groups and governments on the necessity of special regulation on nanotechnology.

With a view to providing a forum for the academicians, scientists and researchers active in the fields of nano-science and nano-technology to deliberate upon the aforementioned issues and to increase awareness of this field's significance, the Centre for Science & Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi, India in collaboration with the Commission on Science and Technology for Sustainable Development in the South (COMSATS), Islamabad, Pakistan and the Institute of Microengineering and Nanoelectronics (IMEN), Universiti Kebangsaan Malaysia (UKM), Malaysia is organizing a 4-days International Workshop on 'Nanotechnology in the Edge of Convergence', on November 24-27, 2011 at Selangor, Malaysia. The United Nations Educational, Scientific and Cultural Organization (UNESCO) is among the major sponsors of this scientific event.

## **2. Objectives of the Workshop**

The international workshop will provide a forum to the participants belonging to various developing/developed countries to:

- Discuss recent advancements in the field of nanotechnology;
- Exchange expertise and knowledge in the field of nanotechnology;
- Build and strengthen linkages among R&D/S&T organisations working in the field of nanotechnology for effective South-South and North-South cooperation in this field;
- Develop strategies for building a pool of scientists and researchers having adequate expertise in this field of vital significance;
- Develop strategies for utilising recent advancements in the field of nanotechnology for socio-economic development in the developing countries
- Encourage professional societies to develop such forums to inform, educate and involve professionals working in this field; and

- Increase awareness of the existing industries' and nano-products' contribution towards socio-economic development.

### **3. Programme of the Workshop**

The Workshop will be held in Malaysia on November 24-27, 2011. The detailed programme will be made available to the participants in due course of time.

### **4. About the Organisers**

#### **(i) NAM S&T Centre**

The Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre; [www.namstct.org](http://www.namstct.org)) is an inter-governmental organization with a membership of 45 countries, spread over Asia, Africa, Middle East and Latin America. The Centre was set up in 1989 in New Delhi, India, in pursuance of the recommendations of various NAM Summit meetings for the promotion of South-South cooperation in science and technology. It undertakes a variety of programmes, including organisation of workshops, symposiums, conferences and training courses and implementation of collaborative projects, and also offers short-term research fellowships to scientists from the developing countries in association with various Centres of Excellence. The Centre also brings out technical books and other scientific publications in different subjects. These activities provide opportunities for scientist-to-scientist interactions; familiarising participants with the latest developments and techniques in the subject areas; identifying the requirements of trainings and expert exchange; locating technologies for transfer between the members and other developing countries; dissemination of S&T information, etc. The Centre also encourages academic-research-industry interaction in the developing countries through its NAM S&T-Industry Network.

#### **(ii) COMSATS**

The Commission on Science and Technology for Sustainable Development in the South (COMSATS; [www.comsats.org](http://www.comsats.org)) is an inter-governmental organisation working for the socio-economic uplift of the developing countries. It was established in 1994 and has its Headquarters located in Islamabad, Pakistan. COMSATS has 21 Member Countries across three continents; Latin America, Africa and Asia. COMSATS' programmes of South-South cooperation in S&T are being implemented through an International Network of seventeen S&T Centres-of-Excellence, which are renowned S&T/R&D institutions in their respective fields of specialization.

Since its inception, COMSATS has made strenuous efforts towards the capacity-building of S&T/R&D organisations in its Member Countries through convening more than 90 and financially supporting hundreds of scientific capacity building seminars, workshops, conferences and meetings in the areas most relevant to their scientific needs. In addition to this, COMSATS' major initiatives for achieving science-led socio-economic development in its Member Countries include: establishing multi-disciplinary academic/research institutions; providing internet and tele-health services; establishing Thematic Research Groups; providing opportunities of scholarships, short-term trainings, experts exchange and laboratory resources sharing; and disseminating knowledge through websites, web-portals, newsletters and S&T publications. COMSATS is committed to develop and strengthen linkages among the countries of the South in order to accomplish its objective of reducing the scientific and technological gap between the countries of the North and the South.

### **(iii) Institute of Microengineering and Nanoelectronics (IMEN), Universiti Kebangsaan Malaysia (UKM), Malaysia**

The Institute of Microengineering and Nanoelectronics (IMEN, [www.ukm.my/imen](http://www.ukm.my/imen)) was officially established in November 2002. The Institute is a strategic initiative for pursuing multidisciplinary research on Microengineering and Nanoelectronics and is a national R&D centre for Malaysia in this area. Research activities at IMEN seek to develop technologies and systems for strategic applications. The Institute focuses on six branches of research themes; Microelectromechanical System (MEMS), High Frequency Technology for Telecommunications Purposes (collaboration with TMR&D Sdn. Bhd.), VLSI System, Photonic Technology, Organic Electronics and Nanoelectronics.

Universiti Kebangsaan Malaysia (UKM; [www.ukm.my](http://www.ukm.my)) was formally established on 18 May 1970. UKM offers a wide variety of academic programmes covering both the arts and sciences. Currently, UKM has 13 faculties, with eight faculties located at the main campus in Bangi.

### **5. Participation**

Academicians, researchers, scientists, policy makers and implementers, and government officials working in the field of nanoscience and nanotechnology in the developing/developed countries, are invited to participate in this international workshop.

### **6. Submission of Nominations**

Applications for participation are required to be submitted in the prescribed form to the NAM S&T Centre), or to the COMSATS if the applicants belong to the member countries of COMSATS, at the contact addresses given at the end of this announcement on or before **Monday, 24<sup>th</sup> October 2011**.

The Malaysian applicants may however send their applications to IMEN, UKM.

The form should be completed in all respects. The submitted application should contain an extended abstract of the paper proposed to be presented in the workshop.

### **7. Selection Criteria**

The participants will be selected on the basis of the relevance and quality of their abstracts of presentations/papers (to be submitted along with the completed nomination/registration form), qualification and expertise. Each selected participant will be required to present a country status report and/or a research/scientific paper on any of the topics appropriate for the workshop. Submission of the full manuscript of presentation material at least 15 days prior to the commencement of event (i.e. **Thursday, 10<sup>th</sup> November 2011**) is a pre-condition to participating in the workshop.

### **8. Venue**

The international workshop will be held at Selangor, Malaysia.

### **9. Publication of Proceedings**

The country status reports, scientific/research papers and other study material presented during the workshop will be compiled along with the learned articles from other authors and will be brought out in the form of an edited book.

## **10. Financial Support**

### **(i) Travel Grants**

Travel grants will be provided to a limited number of selected individuals.

### **(ii) Local Hospitality**

All foreign participants will be provided transportation between Kuala Lumpur International Airport and venue of the workshop. Local hospitality, including accommodation, meals and local transport, during November 23-28, 2011 (i.e. one day before the commencement and after the completion of the workshop) will be provided by the host institution (IMEN). The participants will have to make their own arrangement to stay beyond these days and, therefore, should arrange their flight schedules accordingly.

## **11. Entry Formalities, Immigration and Health**

All participants of the workshop must be in possession of a current passport and valid visa for entry into Malaysia. The embassies/diplomatic mission of Malaysia located in the country of the participants should be approached for obtaining an entry visa. If a particular country does not have a Malaysian Mission, participants from that country would be issued visa-on-arrival provided a specific request is made to the IMEN, UKM (host institution) well in advance. IMEN, UKM will facilitate the issuance of visa by providing the participants with official letters of invitation.

## **12. Other Useful Information about Malaysia**

Climate: Average temperature ranges from 20°C to 30°C.

Monsoon season is on its peak from November to February.

Voltage: 220 volts 50 Hz

Currency: Malaysian Ringgit (MYR); US\$1 = 2.98 MYR.

International Country Code: +60

Malaysian Standard Time Zone: 8 hours ahead of GMT.

### **Note:**

**The governments / institutions of all the participants will be required to bear the following costs:**

- All expenses in the home country incidental to travel abroad, including expenditure for passports, required medical examinations, vaccinations and miscellaneous expenses such as local transportation in the home country.
- Salary and other related allowances for the participants during the period of the workshop.
- Cost of medical insurance to cover the period of participation in the workshop.

**The organisers will not assume responsibility for the following expenditure in connection with the participant's attendance in the workshop:**

- Expenses incurred with respect to any insurance, medical bills or hospitalisation fees.

- Compensation in the event of death, disability or illness of participants.
- Loss of personal belongings or compensation for damage caused to them by climatic or other conditions.
- Other costs, including airport tax and excess baggage.

## Contact Persons

### NAM S&T CENTRE

**(i) Prof. Arun P. Kulshreshtha**  
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**Website:** [www.namstct.org](http://www.namstct.org)

**(ii) Mr. M. Bandyopadhyay**  
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### COMSATS

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### INSTITUTE OF MICROENGINEERING AND NANOELECTRONICS (IMEN), UKM

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**Website:** [www.ukm.my/imen](http://www.ukm.my/imen)

**In order to avoid confusion, the interested professionals from countries other than Malaysia may in the first instance please correspond only with the NAM S&T Centre and COMSATS. However, the Malaysian applicants should send their forms only to IMEN (UKM).**

# REGISTRATION FORM

**International Workshop on  
Nanotechnology in the Edge of Convergence**  
*November 24-27, 2011*  
*Selangor, Malaysia*

Title:  Dr.  Mr.  Ms.  Mrs.

Name (as appears on passport): \_\_\_\_\_

Designation: \_\_\_\_\_

Organization/Department \_\_\_\_\_

\_\_\_\_\_

Highest Qualification \_\_\_\_\_

Present Field of Activity \_\_\_\_\_

Postal Address \_\_\_\_\_

\_\_\_\_\_

City & Province: \_\_\_\_\_ Country: \_\_\_\_\_

Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Boarding & Lodging Required  Yes  No

Travel Grant Required  Yes  No

I wish to participate in this workshop and would like to register for the same.

I wish to present a paper in this workshop on the following topic:

\_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_