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Supported by



- employing more efficient technologies that minimize use of fossil fuels;
- xi. Adopting technologies that utilize renewable energy and energy storage technologies;
 - xii. Addressing carbon management issues that involve separation, capture, sequestration and conversion to useful products.

SUBJECT EXPERTS:

International and regional scientists and industrial experts, as well as other local experts from universities and research institutions working in various fields of nano technology and nano-biotechnology would constitute a pool of subject experts for the event. (About 15 International Experts from various countries will deliver the invited lecture)

WHO SHOULD ATTEND?

Researchers, scientists, students, engineers and technicians working in the field of nano science/ technology meeting the following criteria may register for participation:

- Have at least Bachelor's Degree (B.Sc) in Science/Engineering with experience in any of the relevant fields related to any of the focus areas of the symposium;
- Have M.Sc or Ph.D in Science/ Engineering in nano technology and/or nano-biotechnology in the focus areas;
- Must have good command over English, both in verbal and writing.

For other participants, information and promotion material regarding the event will be circulated through ISESCO, COMSATS and BATAN.

DATE AND VENUE

The symposium will be held in Serpong, Indonesia, from 16th-18th December 2013

MODE OF DELIVERY

The modes of delivery will be through:

- Series of lectures and presentations.
- Group discussions.
- Showcase and live demonstration.

This symposium shall create awareness, understanding, and motivation for participants regarding the applicability of some of the new and innovative nano and bio technology applications.

Through this symposium, it is expected that the relevant scientists, technicians and students are exposed to new innovative solutions to old and lasting contemporary socio-economic problems, with an environmental and climate change dimension.

LANGUAGE

The language of the event will be English.

PUBLICATIONS

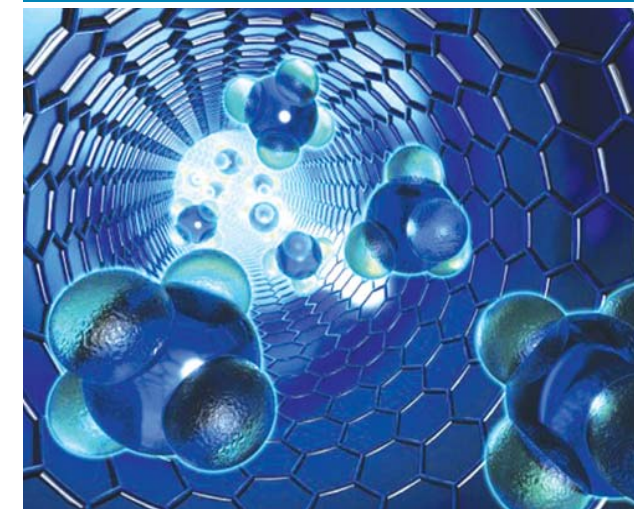
All the manuscripts will be scientifically reviewed and the selected articles are to be published as part of a book of Nanotechnology by COMSATS.



ISESCO-COMSATS-BATAN
Symposium on

NANOTECHNOLOGY AND NANO-BIOTECHNOLOGY INNOVATIVE APPLICATIONS FOR SUSTAINABLE GREEN ECONOMY AND CLIMATE CHANGE MITIGATION

16 - 18 December 2013
Serpong, Indonesia



Jointly Organized by

Islamic Educational, Scientific and Cultural
Organization (ISESCO)

Commission on Science and Technology for
Sustainable Development in the South (COMSATS)

and

National Nuclear Energy Agency (BATAN), Indonesia

INTRODUCTION

The scientific techniques developed in the last two decades have given sufficient control to scientists over growing nano-scale structures in a laboratory. The nano materials thus developed show unique properties due to large surface to volume ratio and quantum-confinement effects. This has revitalized research for application of nano materials in different areas of science and engineering, e.g. in solar cells, catalytic reactions, and biology.

It is well understood that the ability to manipulate matter at nano scale will fundamentally change the way we manage our industrial production, address health issues, grow food and produce energy. The word 'revolution' becomes truly applicable as nano technology gains momentum and becomes part and parcel of our lives. The wide spread global implications of nano materials, potential benefits of nano materials-enabled technologies, and the challenges towards maximizing the risk free benefits, have aroused great stir among the scientific community. The exacerbating energy crises and global climate change call for developing efficient and abundant energy resources as well as for the mitigation of environmental degradation.

Nano biotechnology is considered to be a unique fusion of biotechnology and nano technology, by which classical micro-technology can be merged to a molecular biological approach practically. Through this methodology, molecular grade machines can be made by mimicking or incorporating biological systems to study or modulate diverse properties of a biological system. The increasing availability of nano structures with highly controlled properties has sparked widespread interest in their use in biological

systems. Nano biotechnology may, therefore, ease many avenues of life sciences, by integrating cutting-edge applications of information technology & nano technology for addressing contemporary health, agricultural and environmental issues.

Recognizing the importance of R&D in nano technology and nano-biotechnology, BATAN, ISESCO and COMSATS are jointly organizing a Regional Symposium on "Nanotechnology and Nano-biotechnology Innovative Applications for Sustainable Green Economy and Climate Change Mitigation". These organizations aim to complement the efforts of various stakeholders, for transforming their common Member countries' national economies into a sustainable green economy. The symposium will show case several new and innovative nano and bio applications in a number of strategic economic sectors, such as energy, agriculture, and industry, which are expected to have a huge positive impact on the development of these sectors upon implementation.

AIMS AND OBJECTIVES

The participants of the symposium will be introduced to various nano technology and nano-biotechnology applications in several key economic sectors. The objective is to enhance the participants' awareness and knowledge about the potential of nano technology applications for addressing various developmental issues in sustainable environment-friendly manner in order to build a strong green economy.

The Symposium is aimed to:

- Provide a platform for scientists, researchers, technologist and faculty members to update them on recent developments in the field of nano science

- & nanotechnology;
- Facilitate networking among the scientists working in various disciplines of nanotechnology to address common problems, and share their research for applications of nano-materials in energy and environment; and
- Promote joint research and collaboration among scientific institutions, in general, and scientific community, nano-sciences in particular.

FOCUS AREAS

The Symposium will primarily focus on three broad themes: Nanotechnology Applications, Nano-biotechnology Applications and Climate Change Mitigation. The topics to be covered under these themes will include:

NANOTECHNOLOGY APPLICATIONS

- i. Large-scale production of Nano-materials;
- ii. Applications in energy production and storage;
- iii. Applications for addressing environmental issues (air and water pollution, waste management);
- iv. Nano-materials for green building and construction;
- v. Nano-alloys and surface coating.

NANO-BIOTECHNOLOGY APPLICATIONS

- vi. Nano-materials as a smart drug delivery system;
- vii. Nano-materials for dental applications;
- viii. Nano-biotechnology for bio-fuel production;
- ix. Nano-materials for agriculture applications.

CLIMATE CHANGE MITIGATION:

- x. Focus on reducing energy consumption by

REGISTRATION FORM

ISESCO-COMSATS-BATAN Symposium on

Nanotechnology and Nano-biotechnology Innovative Applications for Sustainable Green Economy and Climate Change Mitigation

December 16-18, 2013, Serpong, Indonesia

Name (*as per passport*) _____

Designation _____

Institution/Organization _____

Highest Qualification _____

Present Field of Activity _____

Postal Address _____

City _____ Country _____

Passport No. _____

Tel. _____ Fax _____

Email _____

Only for Foreign Participants

■ Boarding & Lodging Required Yes No

■ Travel Grant Required Yes No

Signature _____

Date _____

Last date for registration as a participant is November 25, 2013.