



## Workshop on Applications of Nanotechnology (WANT 2010) (May 31 - June 04, 2010)



Jointly organized by the Magnetic Nanostructures Group, Physics Department, Quaid-i-Azam University and National Centre for Physics (NCP) with the support of US National Science Foundation (NSF).

### Introduction

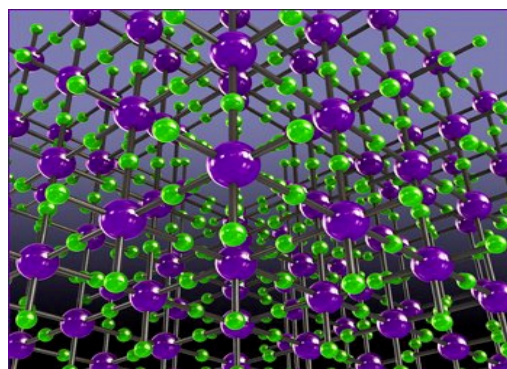
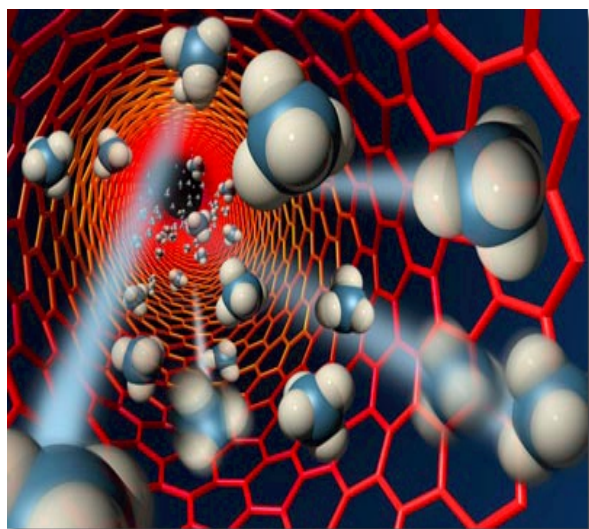
In the last few years a modernization effort has brought nanotechnology research in Pakistan from non-existence to a level which is now interesting for researchers. The workshop aims at expanding the fledgling network of collaborations by bringing together more foreign and Pakistani researchers with complementary expertise. Researchers would benefit from the workshop by interacting with renowned researchers of the field and be exposed to cutting-edge research and expand their network of contacts.

The workshop will be hosted by Quaid-i-Azam University and the National Center for Physics (NCP) in Islamabad and it will focus on materials aspects of nanotechnology. The workshop will be held between May 31-June 4, 2010.

**Venue:** The workshop will be held at the National Centre for Physics (NCP), QAU Campus, Shahdara Valley Road, Islamabad

### Workshop Themes

The workshop lectures will cover a broad range of interests in the general area of the developing field of nanotechnology and its industrial, technological and environmental applications. Relationship of the fundamental research to various applications will be explored. One of the main goals of the workshop will be to foster collaborations and scientific exchanges between Pakistani and US scientists working in the various fields of nanoscience and technology.



### Directors of the Workshop

1. Dr. Massimo Bertino,  
Department of Physics,  
Virginia Commonwealth University,  
Virginia USA.
2. Prof. S. K. Hasanain,  
Magnetic Nanostructures Group,  
Department of Physics,  
Quaid-I-Azam University,  
Islamabad.

### Scientific Secretary

Dr. Arif Mumtaz,  
Magnetic Nanostructures Group,  
Department of Physics,  
Quaid-I-Azam University,  
Islamabad.

### Technical Committee

- Dr. Arif Mumtaz  
Department of Physics (QAU)
- Dr. Mazhar Mehmood  
National Centre for Nanotechnology (PIEAS)
- Dr. Romana Qurashi  
Department of Chemistry (QAU)
- Dr. Sadia Manzoor  
Department of Physics (COMSATS)
- Dr. Tajammul Hussain  
Nano Catalysis Department (NCP)

### Organizing Committee

- Aasim Fasih Khan (NCP)
- Tajammul Husssain (NCP)
- Muhammad Ansar-ul-Haq (NCP)
- Muhammad Asif (NCP)
- Zeeshan Ahmad Siddiqui (NCP)
- Mohammad Usman (QAU)
- Khan Alam (QAU)

### Event Coordinators

- Mohammad Waqas Shabbir (QAU)
- Gul Zaman (NCP)

## Program Outline

- The workshop will cover a broad range of interests in the general area of nanotechnology and its industrial applications.
- Speakers include eminent US researchers in various areas of Nanoscience and its applications. They will include physicists, chemists and materials experts. The list of US speakers and their lecture titles are as follows:
  1. **Prof. Laura Shirtcliff** (Oklahoma State University)  
“A Modular Approach of Self Assembly of Hydrogen-Bonded Electron Donors and Acceptors for Thin Film Organic Photovoltaics”
  2. **Prof. Massimo Bertino** (Virginia Commonwealth University)
    - a. “Caveats, Blasphemies and Opportunities of Nanotechnology”
    - b. “Size effects in Nano: What is new, what is not”
  3. **Prof. Everett Carpenter** (Virginia Commonwealth University)
    - a. “Nanoparticles for Drug Delivery”
    - b. “Introduction to Nanomagnetism”
  4. **Prof. Nicholas Leventis** (Missouri-University of Science and Technology)  
“Mechanically Strong Sol-gel Materials”
  5. **Daniel Hudgins** (Virginia Commonwealth University)  
“One-Pot Aqueous Synthesis of Fe and Ag Core/Shell Nanoparticles”
  6. **Prof. Donald Vander Veer** (Clemson University)  
“Determining the Structures from Single Crystals using X-ray Diffraction”
  7. **Prof. Dexian Ye** (Virginia Commonwealth University)  
(To be announced)
  8. **Prof. Frank Blum** (Oklahoma State University)  
(To be announced)
  9. **Prof. Nicolas Materer** (Oklahoma State University)  
(To be announced)
- Selected local speakers will also give lectures on their work in the fields of nanomaterial physics, chemistry and materials science.
- Faculty, researchers and students from academic institutions and research organizations are welcome to apply.
- The organizers will support travel, boarding and lodging for the selected outstation participants.
- Applications should reach the office of the local organizers by 20<sup>th</sup> May, 2010, preferably by e-mail at the following address:  
caad@ncp.edu.pk: cc.Arif@qau.edu.pk  
Workshop websites: [www.ncp.edu.pk/want.htm](http://www.ncp.edu.pk/want.htm)  
[www.people.vcu.edu/~mfbertino/index.htm](http://www.people.vcu.edu/~mfbertino/index.htm)

### Address for correspondence:

Dr. Aasim Fasih Khan (NCP)  
Director,  
Collaboration and Academic Activities Department (CAAD)  
National Centre for Physics  
Shahdara Valley Road, QAU Campus  
Islamabad-44000  
Phone: 92 51 2077360  
Email: [caad@ncp.edu.pk](mailto:caad@ncp.edu.pk)

