

Workshop Title	<p>Nanotechnology: Incorporation in Industry</p> <p>تكنولوجيا النانو و تطبيقاتها في الصناعة</p>
Venue	<p>Landmark Hotel, Amman, Jordan Tuesday 4 November 2014 4:30 pm – 8:00 pm</p>
Organizer	<p>Dr. Hatem Alsyouri Chemical Engineering Department The University of Jordan alsyouri@ju.edu.jo</p>
Introduction	<p>The 20th century was the era of macro-science, characterized by enormous structures like airplanes, space shuttle, dams, refineries and power plants. Conversely, the 21st century will be dominated by nano-science, featured by molecular scale structures.</p> <p>Nanotechnology is the design, characterization, production and application of structures, devices and systems by controlling shape and size at the nanoscale. A nanometer is a billionth of a meter, that is, about 1/80,000 of the diameter of a human hair. To make it more perceivable, the ratio of diameter of a football to the diameter of earth is close to ratio of diameter of the nano-scaled Bucky ball to the diameter of a football.</p> <p>With the help of Nanotechnology, several challenging and impossible issues become possible. This opens up the opportunity to fabricate a large set of materials with distinct properties (optical, electrical, or magnetic) in various fields. The benefits of nanotechnology are highly promising. It is expected to have uncountable applications serving most fields including electronics, materials, medicine, energy, and environment. This technology will revolutionize most industries in the coming decades.</p> <p>The effect of nanotechnology is not yet experienced in the Jordanian industry, although it is being practiced by a number of scientists at local universities.</p>

Objectives	<ol style="list-style-type: none"> 1. Introduce nanotechnology and highlight its potential industrial applications with focus on: materials, energy, pharmaceuticals, water, and food fields. 2. Present nanotechnology research outcomes for a number of local and international researchers working in these fields. 3. Integrate between researchers at universities and industry to explore opportunities of nanotechnology in the Jordanian market. 4. Stimulate research activities in Jordanian Universities and industries to focus on harnessing benefits of nanotechnology.
Program	<ol style="list-style-type: none"> 1. Materials Novel Continuous Nanofibers for Value-Added Structural and Functional Applications. <i>Prof. Yuris Dzenis, University of Nebraska USA.</i> 2. Energy Using Nanograde Materials in Green Energy Applications. <i>Dr. Farqad Al Hadeethi, Royal Scientific Society, Jordan.</i> 3. Pharmaceuticals Pharmaceutical nanocrystals: a particle design approach to address poor solubility and dissolution of pharmaceutical actives. <i>Dr. Hatim AlKhatib, The University of Jordan, Jordan.</i> 4. Water Nanotechnology in Water Treatment and Desalination. <i>Dr. Mohammed R. Qtaishat, The University of Jordan, Jordan.</i> 5. Food Zinc oxide: An Antibacterial Nanoparticle against Foodborne Pathogenic Escherichia coli O157:H7. <i>Dr. Hamzah Al-Qadiri, The University of Jordan, Jordan.</i>
Who should attend	Industry, governmental and nongovernmental organizations in water, energy, pharmaceuticals, environment, and food. Academic scientists and graduate students working on or with familiarity in nanotechnology. Interested sales people and general audience.
Format	The workshop will be conducted through presentations, panel discussions and open discussions.
Outcomes	Outcomes and recommendations of the workshop will be collected at the end of this meeting.

Fees	100 JD covering attendance and coffee breaks. Participants in the JICHE07 conference are exempt from the fees.
Certificates	Certificates of attendance will be given to participants of the workshop.
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NANOTECHNOLOGY: INCORPORATION IN INDUSTRY

7th Jordan International Chemical Engineering (JIChE07) Conference
Organized by: Dr. Hatem Alsyouri
November 4, 2014
Landmark Hotel, Amman, Jordan

Workshop Program

4:30 – 5:00 MATERIALS

“Novel Continuous Nanofibers for Value-Added Structural and Functional Applications”

Prof. Yuris A. Dzenis

Department of Mechanical and Materials Engineering, University of Nebraska-Lincoln, USA

5:00-5:30 ENERGY

“Using Nanograde Materials in Green Energy Applications”

Dr. Farqad Al Hadeethi

Scientific Research Center, Royal Scientific Society, Jordan

5:30-6:00 PHARMACEUTICALS

“Pharmaceutical nanocrystals: a particle design approach to address poor solubility and dissolution of pharmaceutical actives”

Dr. Hatim S. AlKhatib

Department of Pharmaceutics and Pharmaceutical Technology, Faculty of Pharmacy, The University of Jordan, Jordan

6:00-6:20 COFFEE BREAK

6:20-6:50 WATER

“Nanotechnology in Water Treatment and Desalination”

Dr. Mohammed R. Qtaishat

Department of Chemical Engineering, Faculty of Engineering and Technology, The University of Jordan, Jordan

6:50-7:20 FOOD

“Zinc oxide: An Antibacterial Nanoparticle against Foodborne Pathogenic Escherichia coli O157:H7”

Dr. Hamzah Al-Qadiri

Department of Nutrition and Food Technology, Faculty of Agriculture, The University of Jordan, Jordan

7:20-8:00 OPEN DISCUSSION AND CLOSING