



المنظمة العربية للتجارة والصناعة والتعدين  
المكتب الإقليمي بالقاهرة

## **Photovoltaics in the Arab Countries; Present and Future**

**Tuesday, December 27, 2011**

**within**

**The Arab Forum-2011 on  
Industrial Applications of Nanotechnology  
27-29<sup>th</sup> of December**

**Hilton Dream, Dreamland, 6<sup>th</sup> October  
Cairo-Egypt**

## Workshop Agenda

<b>Day 1</b> <b>Tuesday, December 27, 2011</b>	
8:30-10:00	<b>Registration and Reception</b>
10:00-10:45	<b>Opening Ceremony</b>
	<b>Dr. Mohamed Ben Youssif</b> , Director of Arab Organization of Industrial Development and Mining
	<b>JICA Representative in Egypt</b>
	<b>Prof. Ahmed Khairy</b> , President of E-JUST.
	<b>H.E. Dr. Hussein Khalid</b> , Minister of Higher Education.
	<b>H.E. Dr. Mahmoud Eisa</b> , Minister of Industry and Foreign Trade.
	<b>H.E. Dr. Aly Sabry</b> , State Minister of Military Production.
	<b>H.E. Dr. Nadia Zakhary</b> , State Minister of Scientific Research.
	<b>Prof. Ahmed Zewail</b> : Nobel Laureate, Caltech, USA
10:45-11:00	<b>Coffee Break</b>
<b>Keynote Address, main hall</b>	
11:00-11:45	<b>Nanotechnology: The Big Potential of the Very Small</b> <b>Prof. Mostafa El-Sayed</b> Georgia Institute of Technology, Atlanta, USA.

**Workshop**  
**PV in the Arab Countries; Present and Future**  
**Tuesday, December 27, 2011**

**SESSION-1 (b)**  
**R & D on PV**

**Chairpersons**

Farouk Ismail (Egypt), Masaru Kuno (USA)

11: 50 - 12:10	<b>R &amp; D on PV in US</b> Salah Bedair, NCS University, USA
12:10-12:25	<b>R &amp; D on PV in Egypt</b> Moataz Soliman, Alexandria University & Alexandria Nanocluster, Egypt.
12:25 - 12:40	<b>R &amp; D on PV in Japan</b> Teijiro Ichimura, E-JUST, Egypt.
12:40 - 12:55	<b>Application of Nanoparticles and nanoporous structures in solar energy conversion</b> W. Badawy, Cairo University, Egypt

**SESSION-2(b)**  
**Manufacturing & Application of PV**

**Chairpersons**

Salah Bedair (USA), Waheed Badawy (Egypt)

13:00 - 13:15	<b>Manufacturing &amp; Application of PV in US</b> Salah Bedair, NCS University, USA.
13:15- 13:30	<b>Manufacturing &amp; Application of PV in Egypt</b> Yehia Bahnas, Cairo University, Egypt.
13:30 - 13:45	<b>PV Plant of E-JUST</b> Ahmed Hamza, EJUST, Egypt.
13:45 - 14:00	<b>Efforts for Promotion of PV in Egypt, Past, Present &amp; Future</b> Salah Arafa, AUC, Egypt.
14:00 - 15:00	<b>Lunch</b>

**SESSION-3(b)**

**Round Table Discussion**

**Strategy for R & D, Manufacturing and Promotion PV in AC**

15:00 - 15:10 pm	<b>Barriers for the Promotion &amp; Use of PV</b> Yahia El-Mahgary, E-JUST, Egypt.
15:10 - 15:30 pm	<b>Round Table Discussion: Leaders</b> Farouk Isamil, Salah Bedair, Yehia Bahnas and Yahia El-Mahgary

**Additional Presentation by Eng. Ibrahim Samak from Germany**

Due to family circumstances Eng. Ibrahim Samak Managing Director of Engcotec GmbH, Germany could not join us in the WS. However, he will give his presentation from Germany on "**Photovoltaic's as a Future Sustainable Energy Option in the Arab World**" Immediately after lunch at 3pm. We shall be able to follow it on the projector and you can make questions to him.

**16:00 End of Workshop**





الجامعة المصرية اليابانية للعلوم والتكنولوجيا  
**E-JUST**  
 Egypt - Japan University of Science and Technology  
 エジプト日本科学技術大学



**NANO TECH**  
 Our Design Capability. Unique In-Nano Technology  
**BAHGAT**



المنظمة العربية للتنمية الصناعية والتعدين  
 المكتب الإقليمي بالقاهرة

## Arab Forum-2011

### Industrial Applications of Nanotechnology

(27-29) December, 2011

Hilton Dream, Dreamland, City of 6<sup>th</sup> October

Cairo-Egypt

#### Agenda

<b>Day 1</b>	
<b>Tuesday, December 27, 2011</b>	
<b>8:00am - 10:00am</b>	<b>Registration and Reception</b>
<b>10:00am - 10:45am</b>	<b>Opening Ceremony</b>
	Mr. Mohamed Ben Youssif, Director of AIDMO
	Prof. Ahmed Khairy, President of E-JUST
	Prof. Mostafa El-Sayed, Georgia Institute of Technology, Atlanta, USA
	Prof. Ahmed Zewail, Nobel Laureate, Caltech, USA
	Former Prime Minister H. E. Prof. Essam Sharaf
	H.E. Dr. Nadia Zakhary, Minister of Scientific Research
	H.E. Dr. Hussein Khalid, Minister of Higher Education
	H.E. Dr. Mahmoud Eisa, Minister of Industry and Foreign Trade
	H.E. Dr. Mahmoud Sabry, State Minister of Military Production
	Dr. Ahmed Bahgat, CEO of NanoTech & BAHGAT Group
<b>10:45am - 11:00am</b>	<b>Coffee Break</b>
<b>Keynote Address, main hall</b>	
<b>11:00am - 11:45am</b>	<b>Nanotechnology: The Big Potential of the Very Small</b> Prof. Mostafa El-Sayed
<b>11:45am - 12:30pm</b>	<b>Science and Future Making</b> Prof. Essam Sharaf



Cairo Office  
 مكتب القاهرة



**SESSION-1, main Hall**  
**Potential Application of Nanotechnology**

**Chairpersons**

**Prof. Osamu Tabata (Kyoto University), Prof. Lotfia El-Nadai (Cairo University)**

12:30pm-1:00pm	<b>Nanomaterials &amp; Chemicals for Modern Building (CMB)</b> Dr. Kamal Mostafa, Chairman of CMB Group
1:00pm-1:30pm	<b>Fabrication of Nanomaterial Designs for Real Health Care &amp; Environmental Remediation</b> Prof. Sherif El-Safty, National Institute for Materials Science (NIMS), Tsukuba, JAPAN.
1:30pm-2:00pm	<b>Nanomaterials from Laboratory to Factory</b> Prof. Alaa Edris, Misr El Kheir Foundation
2:00pm-2:30pm	<b>Plasmonic Graphene Nanocomposite</b> Dr. Mona Bakr Mohamed, NanoTech & E-JUST
2:30pm-3:30pm	<b>Lunch</b>

**Keynote Address, main Hall**  
**Nanomaterials for PV fabrication**

3:30pm - 4:15pm	<b>An Overview of Solution-based Semiconductor Nanowire</b> Prof. Masaru Kuno, University of Notre Dame, USA.
-----------------	--

**SESSION-2, main Hall**  
**Nanomaterials for PV fabrication**

**Chairpersons**

**Prof. Sohair Negm (Banha University), Dr. Ahmed Abd El-Moneim (E-EJUST)**

3:30pm - 3:50pm	<b>Application of Nanoparticles and nanoporous structures in solar energy conversion</b> Prof. Waheed Abd Allah Badway, Cairo University, Egypt
3:50pm - 4:10pm	<b>Design and Assembly of 1D Nanostructured Materials for Solar-Driven Water Splitting</b> Dr. Nagah Allam, Engineering and Computer Science Massachusetts Institute of Technology, USA.
4:10pm - 4:30pm	<b>Carbon Nanotube Manufacturing and Investment Opportunities</b> Dr. Mostafa Al Ashry, Egypt Nanotechnology Centre, Egypt
4:30pm - 4:50pm	<b>Potential of Photovoltaic industry in Egypt</b> Prof. Osama Tobail, Egypt Nanotechnology Centre, Egypt
4:50pm - 5:10pm	<b>Nano Materials for Green Energy</b> Prof. Abd El-Hady Kashyot, MuCSAT, Borg Al Arab-City, Alexandria





**Day 2**  
**Wednesday, December 28, 2011**

*Keynote Address, main hall*

<b>9:00am - 9:45am</b>	<b><i>Graphene Based Nanocatalysis for Energy and Environmental Applications</i></b> <b>Prof. M. Samy El-Shall, Virginia Commonwealth University, USA.</b>
------------------------	---

**SESSION-1, main hall**

**Nanomaterials for Biomedical Applications**

**Chairpersons**

**Prof. Hidetoshi Kotera (Japan), Prof. Abd Allah Molikhia (Pharco Pharmaceuticals Cooperation)**

<b>10:00am - 10:30am</b>	<b><i>Medicinal Application of Green Tea Extract in Experimental Hepato-Fibrosis Therapy with a Brief Introduction to Chitosan-Green Tea Nanoparticles</i></b> <b>Prof. Abdel Majeed Safer, Nanoscopy Science Center (NSC), Faculty of Science, Kuwait University, Kuwait</b>
<b>10:30am - 11:00am</b>	<b><i>Biomedical Applications of Magnetite Nanoparticles</i></b> <b>Prof. Mamoun Mohamed, Royal Institute of Technology, Stockholm, Sweden.</b>
<b>11:00am - 11:30am</b>	<b><i>Nanomaterials for Gene Delivery</i></b> <b>Prof. Abdel Rahman Zekri, National Cancer Institute, CU, Egypt</b>
<b>11:30am - 12:00pm</b>	<b><i>Photodiagnosis and Phototherapy using Nanoparticles</i></b> <b>Prof. Mahmoud Abdel-Kader, President of GUC</b>
<b>12:00pm - 12:15pm</b>	<b><i>Coffee Break</i></b>

*Keynote Address, main hall*

<b>12:15pm - 1:00pm</b>	<b><i>Nanomaterials for Thermoelectrical Applications</i></b> <b>Prof. Mamoun Mohamed, Royal Institute of Technology, Stockholm, Sweden.</b>
-------------------------	---

**SESSION-2, main hall**

**Characterization and Identification of Nanomaterials**

**Chairpersons**

**Prof. Teijiro Ichimura (E-JUST) and Prof. Samy El Shall (VCU)**

<b>1:00pm - 1:30pm</b>	<b><i>Nanomaterials for Surface Raman Enhancement</i></b> <b>Prof. Hassan Talaat, Ain Shams University</b>
<b>1:30pm - 1:45pm</b>	<b><i>Nano-Materials Characterization in Analytical Electron Microscopy</i></b> <b>Dr. Tetsuo Oikawa, JEOL, JAPAN.</b>



1:45pm - 2:00pm	<b><i>A State-of-the-Art Scanning Probe Microscope</i></b> <b>Dr. Ryohei Kokawa, Shimadzu, JAPAN.</b>
2:00pm - 3:00pm	<b>Lunch</b>
<b>Workshop</b> <b>Textile and Technical Textile</b>	
<b>Keynote Addresses, main hall</b>	
3:00-3:45 pm	<b><i>Nano-structured Polylactides as High-Performance Bio-based Materials</i></b> <b>Prof. Yoshiharu Kimura</b> , Director of the Center for Fiber and Textile Science, Kyoto Institute of Technology, Japan
3:45-4:15 pm	<b><i>Research and Development of Bio-based Polymers in the Center of Fiber and Textile Science, Kyoto Institute of Technology</i></b> <b>Prof. Hideki Yamane</b> , Center for Fiber and Textile Science, Kyoto Institute of Technology, Japan
4:15-4:30 pm	<b>Coffee Break</b>
<b>SESSION-4</b> <b>Technical Textile, main hall</b>	
<b>Chairpersons</b> <b>Prof. ALi Hebaish (Egypt), Prof. Ahmed El-Salamwy (Egypt)</b>	
4:30pm - 4:50pm	<b><i>From Tradional to Technical textile; Opportunities and Challenges</i></b> <b>Dr. Mohamed Abu Iina</b> , Textile Centre, Ministry of Industry and Foreign Trade, Egypt
4:50pm - 5:10pm	<b><i>Functional Textiles</i></b> <b>Prof. Nabil Abd El-Basat</b> , NRC, Egypt
5:10pm - 5:30pm	<b><i>Applications of Textile Composites</i></b> <b>Prof. Ibrahim Shady</b> , Mansoura University, Egypt.
5:30pm - 5:50pm	<b><i>Development and Application of Medical Textile</i></b> Fogue Miser Cooperation, Egypt.
5:50pm - 6:10pm	<b><i>New Trends in Technical Textile Applications</i></b> <b>Dr. Ahmed Hussien</b> , Alexandria University, Egypt.





**Day 3**  
**Thursday, December 29, 2011**

**SESSION-1**

**Chairperson**

**Prof. Ahmed Khairy (President of E-JUST)**

**8:30am - 9:30am**

*Arab Initiative of Nanotechnology*

**Prof. Fathi Ben Shatwan, (AIDMO-Libya)**

**9:00am - 9:30am**

*Role of UNESCO in Nanotechnology Education*

**Dr. Nazar Hassan, UNESCO**

**9:30am- 10:00am**

*STCE and its role to apply Nanotechnology to develop local industries*

**Prof. Shokry Shokry, Director of STCE**

**Keynote Address**

**10:00am - 10:45am**

*Nanostructured Materials for Catalytic and Biomedical Applications*

**Prof. Jackie Y. Ying, Institute of Bioengineering and Nanotechnology, Singapore**

**10:45am - 11:00am**

*Coffee Break*

**Workshop**  
**MEMs and Device Fabrication**

**SESSION-2**

**Chairpersons**

**Prof. Ahmed Abo-Ismael (E-JUST), Prof. Sherif Sedky (AUC)**

**11:00am - 11:45am**

*Integration of Nanostructure with MEMs*

**Prof. Osamu Tabata, Department of Micromechanical Engineering, Kyoto University, Japan**

**11:45am - 12:30pm**

*MEMs in biomedical applications*

**Prof. Hidetoshi Kotera, Department of Micromechanical Engineering, Kyoto University, Japan**

**12:30pm - 1: 00pm**

*Coffee Break*

**SESSION-3**

**Chairpersons**

**Prof. Osamu Tabata (Kyoto University) & Prof. Mahmoud Hashem (GUC)**

**1:00pm - 1:20pm**

*MEMs at AUC*

**Prof. Sherif Sedky, Yousef Gamel Centre at AUC**



1:20pm - 1:40pm	<b>Microfabrication Creates Microsystems</b> <b>Dr. Ahmed Fath El-Bab</b> , Assuit University & E-JUST
1:40pm - 2:00pm	<b>Microreaction Technology for Photocatalytic Synthesis of High-Value Added Compounds</b> <b>Prof. Yoshihisa Matsushita</b> , Tokyo Institute of Technology & E-JUST
2:00pm -3:00pm	<b>Lunch</b>
<b>SESSION-4</b>	
<b>Fundamentals and Applications of Nanomaterials</b>	
<b>Chairpersons</b> <b>Prof. M. Ayad (E-JUST), Prof. Mona Abd El-Latif (CSAT)</b>	
3:00pm - 3:20pm	<b>Graphene-Based Electrode for SuperCapacitor Application</b> <b>Dr. Ahmed. Abd El-Moneim</b> , Department of Materials Science and Engineering, E-JUST, Egypt
3:20pm -3:40pm	<b>Fabrication and Analytical Applications of Silica Nanotubes in Anodic Alumina Membrane</b> <b>Dr. Moataz Mekaway</b> , Department of Materials Science and Engineering, E-JUST
3:40pm - 4:00pm	<b>First-Principles Simulation on Piezoresistivity for Silicon and Silicon Carbide Nanostructures</b> <b>Dr. Koichi Nakamura</b> , Department of Materials Science and Engineering, E-JUST
4:00pm - 4:20pm	<b>Application of nanotechnology in polymer processing</b> <b>Prof. Abass Ezzat</b> , Chemical and Petrochemical Department, E-JUST, Egypt.
<b>Closing Session</b>	
<b>Prof. Esam Sharaf, Prof. Mostafa El-Sayed, Samy, Prof. Ahmed Khairy, Prof. Samy El-Shall &amp; Dr. Nezar Hasan</b>	





# Micro Electro Mechanical System Workshop MEMS

## "Microfabrication create Micro Systems"

**28**  
 DECEMBER  
 2011

### Workshop Overview

Micro-Electro-Mechanical-Systems (MEMS) has been the focus of worldwide research and development efforts for the past ten years. These emerging fields involve fundamental research and the unique design and engineering of sophisticated integrated mechanical, electronic and optical systems on the micro-scale.

The scientific field of MEMS is multidisciplinary and involves the collaborative efforts of researchers from diverse fields such as physics, chemistry, mechanics, electronics, materials science and computer science. Extensive research in these disciplines is currently being directed towards obtaining a better understanding of the micro-scale phenomena encountered in MEMS devices.

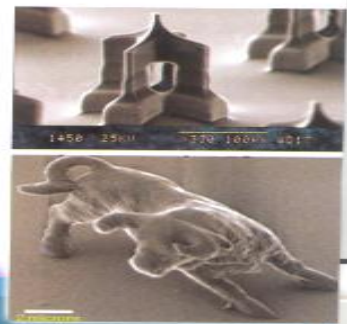
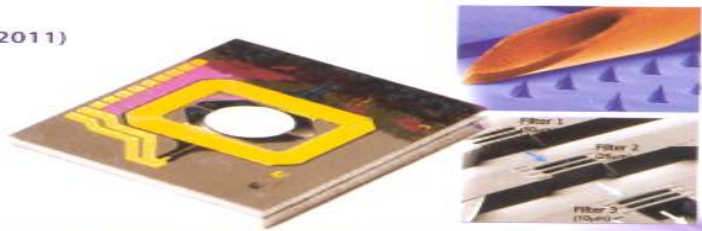
The economical and practical benefits of MEMS applications are enormous. The technology is an offshoot of standard design techniques and batch fabrication methods used in the microelectronics chip industry. It enables the realization of very small, highly sophisticated, accurate and reliable systems at a very low cost. The development of a MEMS infrastructure and the promotion of MEMS-based industries are a priority all over the industrial countries. Now Egypt is accessing this field. The proposed workshop will offer a unique opportunity for researchers to interact and form new collaborations to enhance cooperation between researcher to promote the MEMS research and local high-tech industries in Egypt.

The workshop will focus on aspects of MEMS technology and development which are of particular interest to Egypt-Japan University of Science and Technology (E-JUST) and many other Egyptian universities. The workshop will combine keynote lectures, and small workgroup gatherings designed to promote collaboration between researchers.

### For Participation

Kindly inform (Before 17/12/2011)

Dr. Ahmed Rashad Fath El-Bab  
 Mobile: +2 0109 1359 123  
 Email: ahmed.rashad@ejust.edu.eg



### Speakers

- Prof. O.Tabata - Kyoto University - Japan
- Prof. Kotera - Kyoto University - Japan
- Prof. S.Sedki - AUC - Egypt
- Dr. Fath El-Bab - Assiut University - Egypt  
 (Coordinator)

- "Integration of Nanostructure with MEMS"
- "MEMS at AUC"
- "Micro-fabrication creates Micro systems"



# PV ITS PRESENT & FUTURE IN ARAB COUNTRIES

One-day Workshop 27.12.2011

## Purpose

### Photovoltaic's (PV)

is finally gaining solid ground in the Arab Countries thanks to the abundant solar radiation. However, no national strategy yet exists in most of the Arab Countries for R & D, Manufacturing and Application or for the Promotion of the Use of PV. Egypt-Japan University for Science & Technology (E-JUST) is arranging a Workshop for addressing these topics. Top scientists in the field of PV are invited from Egypt, Europe, Japan and US to the WS to deliver presentations and take part in the formation of the three-pronged National Strategy of the Arab Countries. The Strategy could then be adapted by each country according to its circumstances, and recommended for adoption.

The conference program will include sessions on

- ▶ Current R & D on PV in the Arab countries, Europe, Japan and USA
- ▶ The Technology of Manufacturing of PV in the Arab countries, Europe, Japan and USA in the Arab countries, Europe, Japan and USA
- ▶ Promotion Plans of and Activities for the Use PV in Egypt, Europe, Japan & USA.
- ▶ In the final Session an outline of a Comprehensive Strategy for R & D, Manufacturing and Promotion of PV will sought.

## Lecturers

- ▶ Prof. Selah Bedair (USA)
- ▶ Prof. Yehia Bahnas (Egypt)
- ▶ Eng. Ibrahim Samak (Germany)
- ▶ Prof. Tejiro Ichimura (Japan)
- ▶ Prof. Fouad Abu El-fotuh (Egypt-USA)
- ▶ Dr. Ahmed Abd El-Monein (Egypt)
- ▶ Prof. Yehia ElMahgary (Egypt-Finland)
- ▶ Prof. Moataz Soliman (Egypt)



There will be a possibility to follow the lectures live on the internet.

For participating kindly inform (Before 17/12/2011)  
 Ms. Nancy Arief  
 E-mail: [rn21@yahoo.com](mailto:rn21@yahoo.com)  
 Mobile: (+2) 01223512536



# Industrial Applications of Nanotechnology

Promising Investment Opportunities for Industrial Applications of Nanotechnology

27 - 29 December 2011

Hilton Dream - Dreamland - 6th October City

under the auspices of

**Minister of Industry and Foreign Trade**  
**Minister of Higher Education**  
**Minister of Scientific Research**  
**Minister of Military Production**

## Objectives

- Raise awareness of nanoscience and nanotechnology
  - Shed light on the industrial applications of nanotechnology on the global level
  - Recognition of Arab experiences in the field of research and applications of nanotechnology and the promising opportunities for industrial applications for these technologies
  - Networking scientists and experts Forums Diaspora with their counterparts in the Arab world
  - Transfer the international experience in bridging the gap between scientific research institutions and industry to Arab World
  - Finding opportunities for Arab cooperation in this field

## Topics

- Arab experiences of research and applications of nanotechnology (country papers)
- Industrial applications and investment opportunities of nanotechnology on the global level and Arab initiatives to establish specialized companies (of process)
- The following applications of nanotechnology will be highlighted: Other applications such as water desalination, surface coating, construction materials, cement, Nanomedicine, Fertilizers and pesticide, food industries, Petrochemicals will be discussed.

## Extended Workshops

- Strategy of Photovoltaics ( 27 December)
- Textiles and technical textile ( 28 December)
- MEMs and device fabrication ( 29 December)

## Who to participate and prepare working papers

- Decision makers at Ministries of industry and ministries of scientific research in Arab countries
- Scientific societies worldwide and in the Arab countries
- Industrial companies all over the Arab countries (textile industries - food industries, pharmaceutical industries, petrochemicals ..... etc.)
- Businessmen and Arab investors
- Arab experts and scientists specializing in the field of nanoscience and nanotechnology in the Arab world and diaspora

## Invited Speakers

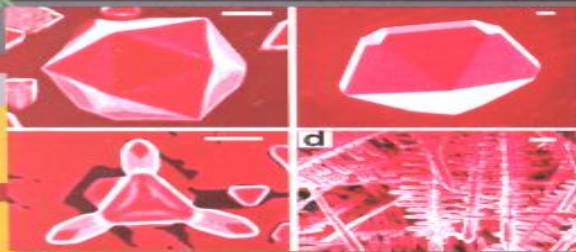
- Prof. Mostafa El-Sayed (USA)
- Prof. Samy El-Shall (USA)
- Prof. Sumio Iijima (Japan)
- Prof. Yoshiharu Kimura (Japan)
- Prof. Masaru Kuno (USA)
- Prof. Mamoun Mohamed (Sweden)
- Prof. Sei-ichi Nishimoto (Japan)
- Prof. Fathi Ben Shatwan (AIDMO-Libya)
- Prof. Osamu Tabata (Japan)
- Prof. Jackie Y. Ying (Singapore)
- Prof. Abdel Majeed Safaer (Kwait)
- Prof. Salah Bedair (USA)
- Prof. Fouad Abu El-Ftouh (Egypt)

## Scientific Committee

- Prof. Yehia Mohamed El-Mahgary
- Dr. Mona Bakr Mohamed
- Dr. Ahmed Abd El-Moneim
- Dr. Ahmed Fathel bab
- Dr. Mohamed Abou liana

## In collaboration with

- Academy of Scientific Research and Technology
- Arab Union of Textile Industries
- City of Scientific Research and Technology Application
- Japan International Cooperation Agency
- Japan Society for the Promotion of Science
- Pharco Corporation
- Science Age Society
- The Arab Organization for Industrialization
- Kyoto Environmental Nanotechnology Cluster
- Technology and Innovation Council, Ministry of Trade and Industry, Textile Development Center





Media sponsor

Dream Channels:

Presenter  
Mona El-Shazly

Presenter  
Ahmed El-Meslemani

ees

Egyptian: **1000 EGP** (Industry) (Accommodation: NOT included)  
Egyptian: **800 EGP** (Academic) (Accommodation: NOT included)  
Egyptian: **3000 EGP** (Accommodation/3 nights at Hilton Dream: included)  
Non-Egyptian: **600 \$** (Accommodation: NOT included)  
Non-Egyptian: **950 \$** (Accommodation/3 nights at Hilton Dream: included)

Fees will cover the following:

- Attendance of the forum
- Bag containing documents of the forum and attendance certificate
- Escorting (from/to: Airport - Hilton Dream Hotel)
- Lunch & coffee breaks all days the forum
- Shuttle buses (from/to: Main gate of Cairo University - Hilton Dream Hotel, Dreamland)

or Registration

**Bank Name** : Commercial International Bank (Egypt) - CIB  
**Branch** : Mina Garden city  
**Acc. No.** : 7450001024  
**Acc. Name** : NanoTech For Electronic Photo Rese (Conferences)  
**Swift Code** : CIBEEGXCX074

**For Tour Purpose: Consult the following**

Mr. Ahmed El-Shwaikh  
Email: [alshweikh@yahoo.com](mailto:alshweikh@yahoo.com)  
Tel: +2 0122 3913 517

contact us

**Arab Organization for Industrial Development and Mining**

Tel: (+202) 23807565- 23583990  
Email: [aidmoroc@yahoo.com](mailto:aidmoroc@yahoo.com)

**NanoTech Egypt, BAHGAT Group**

Tel: +202 3858 1440  
Email: [info@egypt-nanotech.com](mailto:info@egypt-nanotech.com)

**Egypt-Japan University for Science and Technology (E-JUST)**

Tel: +2 0128 122 9082  
Email: [pr@ejust.edu.eg](mailto:pr@ejust.edu.eg)



المكتب الإقليمي بالمملكة العربية السعودية  
المكتب الإقليمي بالمملكة العربية السعودية



Applications of Nanotechnology

Applications of Nanotechnology



## Electron Microscope



NanoTech Has the latest update from JEOL, The High Resolution Transmission Electron Microscope (HRTEM) JEM-2100.

This great facility is not just as a part of our system for quality assurance of nanomaterials production, but it services also the industrial and Scientific community for inspecting and characterizing nanomaterials involved in industry and scientific research.

Operating at 200 kV and equipped with a Gatan's high resolution CCD camera, our equipment can go deep inside your material till the atomic scale with spatial resolution reaching 0.14 nm.

## Training & Courses



- NanoTech will offer courses to introduce and train young scientists, researchers, engineers and students to nanotechnology.

### Available Packages

- Introduction to Nanotechnology
- Nanomedicine & Nanotechnology for Biomedical Applications
- Nanotechnology for Engineering
- Nanotechnology for Revolutionizing Agriculture and Food industries
- New Nanomaterials for Oil Refining and Petrochemical Industries
- Nanotechnology in Textiles Finishing



## NANO TECH

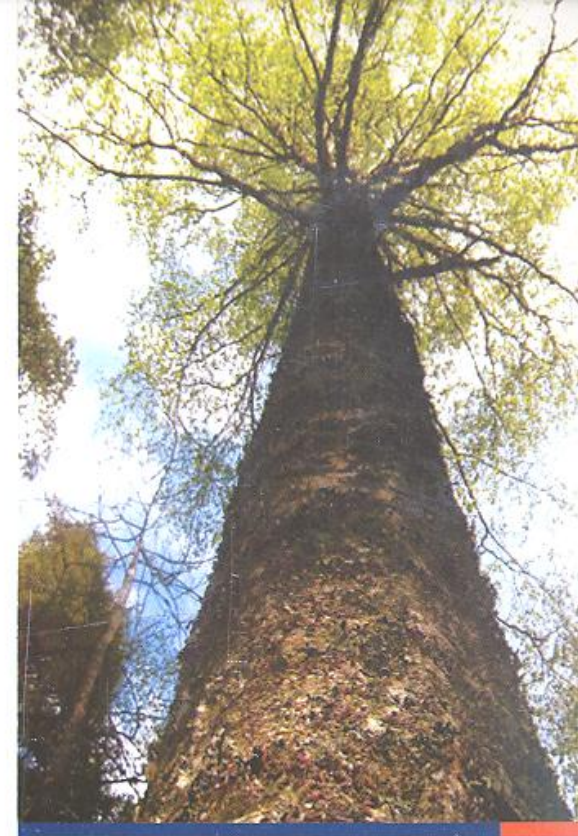
Our Design Capability Unique In NanoTechnology

Dreamland, Wahat Road, 6<sup>th</sup> October, Egypt.

T.: (+202)3858 1440

F.: (+202)3858 1441

[www.egypt-nanotech.com](http://www.egypt-nanotech.com) [info@egypt-nanotech.com](mailto:info@egypt-nanotech.com)



## NANO TECH

Our Design Capability Unique In NanoTechnology

### NANO TECH Portfolio 2011





## Who We Are?

NanoTech is the first company in Egypt and Arab world which offers different nanomaterials designs according to the customer request.

NanoTech is proud of being a newly born member of BAHGAT, cooperating with well established and experienced business and highly qualified researchers and engineers in the field of nanotechnology.

NanoTech commit ourselves to tailor nanomaterials to be green from the beginning for more innovation.

NanoTech not only provides nanomaterials but also provides technologies and solutions to meet a variety of needs of industries and scientific research communities, including universities, institutes, research centers, medical laboratories, etc...

NanoTech strength based on the world-class Nanotechnology which has multiple potential applications in all scientific and industrial fields.

**Our Vision:**  
Achieving Excellence in Our Society through NANOTECHNOLOGY and a sustainable economy

**Our Mission:**  
We are aiming to lead in the field of nanotechnology to improve the quality of life.  
We are looking forward bringing together Nanotechnology professionals and practitioners from the academia, industry and government to share knowledge and experience aiding economic growth.  
We are committed to deliver flexible and high quality integrated solutions through our R&D and a wide range of nanomaterials designed to fit our client's business requirement.

### We have obligations towards:

- OUR Society "Raise public awareness"
- Young researchers "Capacity building and get introduced to Nanotechnology field"
- Industry "Nanotechnology based economy"
- Stakeholders "Enhance the quality of products"
- OUR Employees "Give them friendly working environment and better lifestyle"

### R&D projects:

- Water Desalination
- Renewable and Green Energy (Solar Cells)
- Biomedical Imaging

### We can offer:

- Scientific and technical consultation
- Specialized training in Nanotechnology through series of seminars, workshops, practical training...etc.
- Designing and fabrication of nanomaterials according to customer needs for different applications.
- Characterize your nanomaterials using Transmission Electron Microscopy (TEM)



## Biomedical Applications

NanoTech will address the state of the art in nanotechnologies and nanomedicine and their ongoing applications focused on addressing the use of nanomaterials in cancer diagnosis and treatment.

NanoTech cover also all aspect of using nanomaterials as drug carrier, gene delivery, biomarkers, cosmetics, ...etc.

Nanotechnology for imaging, detection and therapy

Nanotechnology for antibacterial, antifungal and antiviral activity



## Solar Cells

Developing photo electrochemical solar cells using naturally available dyes.

Design and fabrication of photovoltaic devices with improved efficiencies, based on quantum dots prepared by colloidal methods.

Enhancing the photon-to-current conversion efficiency by incorporating metal nanoparticles in Plasmonic Solar Cells.

Application of Graphene as the new material for transparent electrodes instead of conventional ITO.

Optimization of metallic ink prepared from metal nanoparticles for back electrodes and connections in solar panels.



## Water Desalination

NanoTech developed new methodology which combines solar desalination and nanotechnology in its laboratory. This methodology based on producing low cost nanocomposite to be used for water desalination. These new nanomaterials absorb light so strongly and convert it efficiently into heat energy