19th Nano Congress for Next Generation

Brussels, Belgium  August 31-September 1, 2017

Theme: nanotechnology concepts methodologies tools and applications

**For Available Speaker Slots**
nanocongress@nanotechconferences.org

Conference Secretariat
Conference Series LLC 2360 Corporate Circle, Suite 400 Henderson, NV 89074-7722, USA
Email: nanocongress@nanotechconferences.org; nanocongress@conferenceseries.net
# Program at a Glance

## Day 1

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<tr>
<th>Time</th>
<th>Reception/Registration</th>
<th>General Session</th>
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<td>09.00-09.15</td>
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<td>09.15-09.45</td>
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<td>Keynote/Plenary Talk 2</td>
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<td>10.15-10.45</td>
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**Least of 3 Keynote/Plenary Talks**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>15.45-17.25</td>
<td>Coffee/Tea Break 10.45-11.00 (Networking)</td>
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<tr>
<td>11.00-12.40</td>
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<td>13.30-15.30</td>
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<td>15.45-17.25</td>
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## Day 2

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<tr>
<th>Time</th>
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<td>09.00-10.40</td>
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<td>10.55-12.35</td>
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<td>13.25-15.05</td>
<td>5 Speakers (20 Mins Each)</td>
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<td>5 Speakers (20 Mins Each)</td>
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**Coffee/Tea Break**

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<td>13.00-15.00</td>
<td>Lunch Break 12.35-13.25</td>
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<td>15.05-15.20</td>
<td>Coffee/Tea Break 15.05-15.20 (Networking)</td>
</tr>
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**Poster Sessions**

**Awards & Closing Ceremony**

NOTE: Program Schedule is subject to change with final allotment of the speaker slots

For more Details [http://nanocongress.conferenceseries.com/](http://nanocongress.conferenceseries.com/)

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TOURIST DESTINATIONS IN BRUSSELS

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Bruges belfry
Cathedral of saint bavo

Ghent gravensteen
King & Wood Mallesons

Leuven st.peters church
Notre dame du sablon
Keynote Forum

Introduction

Dr. Salvatore Santoli
International Nanobiological Testbed Ltd, UK

Dr. Joachim Koetz
University of Potsdam, Germany

Dr. Magdalena Plebanski
Monash University, Australia

Track 1: Nano-materials

Title: Carbon Nanotube Composites for Photovoltaic and Bolometric Applications
Dr. I.A. Levitsky, Emitech, Inc., USA

Title: Carbon Nanotube synthesis and applications: The multiscale approach
Dr. Alex V. Vasenkov, CFD Research Corporation, USA

Title: Hybrid Tungsten Oxide /Carbon Nanoplatelets and Nanorods Prepared directly in a flame volume
Dr. Wilson Merchant-Merchant, University of Oklahoma, USA

Title: Meshing challenges in constructing implicit solvation models of biomolecular structures
Dr. Jessica Zhang, Carnegie Mellon University, USA

Title: Optical and electrical properties of covalently-functionalized double-wall carbon nanotubes
Dr. Yuhuang Wang, University of Maryland, USA

Title: Modeling of Nanostructures: Nanocrystals, surfactants, and Nanobiosystems
Dr. Maria Stepanova, National Institute for Nanotechnology NRC, Canada

Title: Solid-state synthesis and applications of iron (III) oxide nanomaterials
Dr. Libor Machala, Palacky University, Czech Republic

Title: Dynamics of irradiation: From molecules to nano-objects and from material science to biology
Dr. Eric Suraud, Université Paul Sabatier, France

Title: Modeling the nanoparticle-reinforced composite
Dr. Linxia Gu, University of Nebraska-Lincoln, USA

Title: Nitrogen plasma treatment effect on graphene sheathed vertically aligned carbon nanofibers
Dr. D.C. Ghimire, Chubu University, Japan

Title: Physical, mechanical, bound rubber and dynamic mechanical studies of chlorobutyl Nanocomposites: Effect of multiwalled Carbon nanotube loading and storage time
Dr. S.P. Mahapatra, National Institute of Technology Raipur, India

Track 3: Nanomedicine

Session Introduction
Title: Nanotechnology for regenerative medicine: Increasing tissue growth, decreasing infection, and inhibiting inflammation
Dr. Thomas J. Webster, Brown University, USA

Title: Nanoplatforms for cancer targeting and imaging
Dr. Weibo Cai, University of Wisconsin - Madison, USA

Title: Tailored Ag nanoparticles for surface enhanced Raman spectroscopic analysis of heme cofactor/ enzyme complexes
Dr. Inez Weidinger, Technical University Berlin, Germany

Title: Easy detection of pM porphyrin concentrations using silver nanoparticles
Dr. Karolina Siskova, Palacky University, Czech Republic

Title: Nanoparticles for protein delivery: Improving efficacy, reducing protein diffusion, and reducing tissue overgrowth
Dr. Esmaiel Jabbari, University of South Carolina, USA

Title: AFM nanoprobing of alpha-synuclein self-assembly
Dr. Alexey V. Krasnoslobodtsev, University of Nebraska Medical Center, USA

Title: Advances in targeted lung nanomedicine as inhalable multifunctional microparticles & nanoparticles for pulmonary disease treatment and prevention
Dr. Heidi M. Mansour, University of Kentucky, USA

Title: Zinc oxide nanoparticles selectively induce apoptosis in cancer cells mediated through reactive oxygen species
Dr. Maqusood Ahamed, King Saud University, Saudi Arabia

Day 2 March 13, 2012

Salon D

Track 2: Nano-particles

Session Introduction

Title: Unattached radon progeny as an experimental tool for dosimetry of nanoaerosols: Proposed method and research strategy
Dr. Lev S. Ruzer, Lawrence Berkeley National Laboratory, USA

Title: Polyelectrolyte-stabilized gold nanoparticles of different size and shape
Dr. Joachim Koetz, University of Potsdam, Germany

Title: Nano-RNAi-functionalized polyvalent gold nanoparticles as novel antiglioma therapeutics
Dr. Alexander H. Stegh, Northwestern University, Chicago

Title: Soot particle formation in laminar diffusion biodiesel and diesel fuel airflames
Dr. Wilson Merchan-Merchan, University of Oklahoma, USA

Title: Invitro evaluation of the physiochemical effects of drug loaded carbon nanotubes on toxicity
Dr. Sunny Iyuke, University of the Witwatersrand, South Africa

Title: Nano-structures on plasma membrane of immune cells: Isolation and characterization
Dr. Anil K Bamezai, Villanova University, USA

Title: GFP as a intracellular temperature probe
Dr. Sebastian A. Thompson, ICFO-Institute of Photonic Sciences, Spain

Track 6: Nanotechnology
Track 7: Nano-sensors
Track 8: Drug delivery

Session Introduction

Title: pH induced conformational change and intramolecular dynamics of PAMAM dendrimers
Dr. Yi Liu, California Institute of Technology, USA

Title: Approaches to increasing surface stress for improving sensitivity of nanomechanical biosensors
Dr. Hai-Feng Ji, Drexel University, USA

Title: Targeted Drug Delivery Systems: Achievements and challenges
Dr. Silvia Muro, University of Maryland College Park, USA

Title: Profiling alternative splicing in Breast Cancer cells by surface-enhanced Raman Spectroscopy
Dr. Lan Sun, Sandia National Laboratories, USA
Title: Nanoparticle-based thin film devices and their applications
Dr. Wen-Yin Ko, National Chung-Hsing University, Taiwan

Title: Modulating the Phytotoxic effects of Ag NPs using BSA
Dr. Aswathy Ravindran, SASTRA University, India

Title: Fabrication of TiO2 nanoparticle thin film on titanium surfaces for application as bacterial sensor/biochip for rapid, sensitive and direct analysis of pathogenic bacteria using MALDI-MS
Dr. Judy Gopal, National Sun Yat-Sen University, Taiwan

Title: Advanced Nanobiomaterials for Multifunctional Neural Interfaces
Dr. Mohammad Reza Abidian, Pennsylvania State University, USA

Title: Stealth liposomes loaded with photosensitizer as drug delivery system: Increasing tumor-selectivity, enhancing PDT efficacy
Dr. Tran Thi Hai Yen, Hanoi University of Pharmacy, Vietnam

Title: Analysis of micro and nano-sized particles with a tunable nanopore sensor for the precise engineering of drug delivery systems for Nanomedicine applications
Mr. Subhash Kalluri, Izon Science Ltd, USA

Title: Plasmonic photothermic angioplasty with nanoparticles and stem cells as the new revolution in international cardiology
Dr. Kharlamov A.N., Ural Institute of Cardiology, Russia

Poster Presentations
Cocktails & Reception at Nebraska AB - Sponsored by Journal of Nanomedicine & Nanotechnology

Day 3 March 14, 2012

Salon D

Track 9: Nano-electronics
Track 10: Antimicrobial activity of metals
Track 11: Applications of nanotechnology
Track 12: Nano-devices

Title: Single-molecule science with a nanopore: Inspiration from nature
Dr. Liviu Movileanu, Syracuse University, USA

Title: Metal nanoparticles and semiconductor nanocrystals synthesis and applications
Dr. Vanga R. Reddy, University of Arkansas, USA

Title: Use of quantum dot functionalized cell-penetrating peptides in cells and micro particles in a venous thrombosis model
Dr. Antonio Peramo, University of Michigan, USA

Title: Wireless nanonetworks for advanced medical applications and treatments
Dr. Ahmed Safwat, Queen’s University, Canada

Title: Anti bacterial activity and non-phytotoxic nature of neem oil nanoemulsion
Dr. C.H. Anjali, VIT University, India

Title: Fabrication and characterization of Pd nanocluster devices
Dr. A. I. Ayesh, United Arab Emirates University, UAE

Title: Antibiotic-Assembled gold nanoparticles: New trend for the development of anti-ESBL Escherichia coli
Dr. Ahmad Kabbani, Lebanese American University, Lebanon

Title: Nanoparticle assisted enhanced biosynthesis of haloarchaeal carotenoid pigments: Preconcentration of pigments through Pt nanoparticle based liquid-liquid microextraction for MALDI-MS analysis
Dr. Muthu Manikandan, National Sun Yat - Sen University, Taiwan

Title: Formation of luminescent PbS coupled quantum dots
Dr. Nabanita Dutta, Variable Energy Cyclotron Centre (VECC), India
Title: Nano-scale approaches for controlling dielectric thin films for photonic waveguide engineering using ultrafast pulsed lasers - a novel approach for non-clean room fabrication!

Animesh Jha,
University of Leeds, UK

Title: Fabrication and mechanical properties of fiber/metal hybrid nanocomposite laminates at elevated temperature

Ming-Hwa R. Jen,
National Sun Yat-Sen University, Republic of China

Title: Advanced research and nanotechnological applications of Graphene

Serhii Shafraniuk,
Northwestern University, USA

Title: Molecular transformation using nanotek catalysts: Nanoporous metal skelton catalysts for green organic synthesis

Yoshinori Yamamoto,
Tohoku University, Japan

Title: Understanding the freezing of water on surfaces at the nanoscale to control ice formation at the macroscale

Albert Verdaguer,
ICN2 - Institut Catala de Nanociencia i Nanotecnologia, Spain

Title: Development of methods for Graphene production and chemical modification

Horacio J. Salavagione,
Instituto de Ciencia y Tecnologia de Polimeros, Spain

Title: Polymer wrapping technique for selective extraction of specific large-diameter semiconducting single-wall carbon nanotubes

Masayoshi Tange,
National Institute of Advanced Industrial Science and Technology, Japan

Title: Study thickness uniformity, wrinkling and effect of ambient conditions in epitaxial Graphene grown on SiC polytypes

G. Reza Yazdi,
Linkoping University, Sweden

Title: New approach for synthesizing individual, controlled diameter SWNTs for electronics

Fatima Z. Bouanis,
Institut Francois des Sciences et Technologies des transports, France

Title: Role of self-assembled monolayers in carbon nanomaterial; Synthesis, hybrid materials and device application

Prashanta Dhoj Adhikari,
Sungkyunkwan University, Korea

Title: Synthesis and characterization of nanocomposites formed by metallic nanoparticles in insulating matrix

Maria Cecilia Salvadori,
University of Sao Paulo, Brazil

Title: All carbon p-i-n solar cell by microwave surface wave plasma CVD

Dilip Chandra Ghimire,
Chubu University, Japan

Title: Dynamics of protonic transport through the nanochannel water in molecular porous crystals

Hiroshi Matsui,
Tohoku University, Japan

Title: Dynamic tensile modulus and tunneling current under applied electric field for polymer-carbon filler composites

Masaru Matsuo,
Dalian University of Technology, China
Track 1: Nanomaterials (Session 3)

Session Chair: Bernd Rellinghaus, IFW Dresden, Germany
Session Co-Chair: Stoyan Sarg Sargoytchev, York University, Canada

Session Introduction

Title: Graphical 3D modeling of molecules and nanostructures in sub-nanometer scale with the BSM-SG atomic models
Stoyan Sarg Sargoytchev, York University, Canada

Title: Synthesis of protein encapsulated rare earth nanoparticles
Hideyuki Yoshimura, Meiji University, Japan

Title: Structure-property relations in high anisotropy nanomagnets
Bernd Rellinghaus, IFW Dresden, Germany

Title: Hardness of the Fe81Ga19/Si(100) film measured by the nano-indentation method
Shien-Uang Jen, Institute of physics, academia sinica, ROC

Title: Ferrochemical materials
Dominique Ausserre, Universite du Maine, France

Title: Application of multiscale theory and modeling to nanoscience and nanotechnology
Sergey Gusarov, National Institute for Nanotechnology, Canada

Title: Vapor-deposited metal-boride interfacial layers as diffusion barriers for nanostructured diamond growth on cobalt alloys
Shane Aaron Catledge, University of Alabama at Birmingham, USA

Title: Simulation of self-assembly in an evaporating inkjet-sized droplet of colloidal solution by dissipative particle dynamics
Peter Lebedev-Stepanov, National Research Nuclear University MEPhI, Russia

Title: Design of electronic transport property through electronic phase manipulation in correlated electron materials
Teruo Kanai, Osaka University, Japan

Title: Versatile silica coating strategy on hydrophobic quantum dots towards nano-engineering
Mohamed F. Foda, Huazhong Agricultural University, China

Title: The morphology and growth kinetics of silicon-silver multicomponent heterostructured nanoparticles in the gas phase
Mukhles Sowwwan, Okinawa Institute of Science and Technology, Japan

Title: α–Phase organic/inorganic layered nanohybrids, types, structures and their application as the precursors for producing carbon materials for use as polymeric fuel cell cathode materials
Mohammad Yeganeh Ghotbi, Malayer University, Iran

Track 2: Nanostructures

Session Chair: Hiroshi Yao, University of Hyogo, Japan
Session Co-Chair: Hiroshi Uyama, Osaka University, Japan

Session Introduction

Title: Fine-controlled metal-assembling using a dendrimer reactor
Kimihisa Yamamoto, Tokyo Institute of Technology, Japan

Title: Functional polymer monoliths with nanoscale porous structure fabrication and applications
Hiroshi Uyama, Osaka University, Japan

Title: Alloying trends from first principles: A case study of ternary and multinary nitrides
David Holec, Montanuniversitat Leoben, Austria

Title: Synthesis, atomic structure and hydrogen storage properties of aluminum hydride
Kazutaka Ikeda, High Energy Accelerator Research Organization, Japan

Title: Reversible nano-lithography between materials
Joe Hong Park, Korea National NanoFab Center, Korea

Title: Highly efficient single host white emitting Sr2.91V2O8:Eu0.06 nanophosphor for UV-LED
K. N. Shinde, N.S. Science and Arts College, India

Title: High molar extinction coefficient HeterolepticRu(II)-Mixed Ligand Polypyridyl complexes containing Anthracenyl and 2-Methyl-2-butoenoic acid functionalities: New emerging dyes for dye-sensitized solar cell application
Adewale O. Adeloye, University of South Africa, South Africa

Title: Toxicity of nano structures
Fahad Al-Mubaddel, King saud University, Saudi Arabia

Cocktails Sponsored by Journal of Nanomedicine & Nanotechnology @ Bora Foyer
### Track 3: Nanomedicine (Session 1)

**Session Chair:** Julia Y. Ljubimova, Cedars-Sinai Medical Center, USA  
**Session Co-Chair:** Thomas J. Webster, Northeastern University, USA

<table>
<thead>
<tr>
<th>Title</th>
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<tr>
<td>Direct electron microscopic recording of the powerstroke in individual myosin heads in hydrated myosin filaments studied using the gas environmental chamber</td>
<td>Haruo Sugi, Teikyo University, Japan</td>
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<td>New class of nanomedicines to image and treat primary and metastatic tumors</td>
<td>Julia Y. Ljubimova, Cedars-Sinai Medical Center, USA</td>
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<td>From nanotechnology to picotechnology: What is on the horizon?</td>
<td>Thomas J. Webster, Northeastern University, USA</td>
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<td>Dendrimers and metalloendrimers for biomedical applications: A recent overview</td>
<td>Joao Rodrigues, Universidade da Madeira, Portugal</td>
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<td>Nanotechnology in liver cancer</td>
<td>M. G. Krukemeyer, Paracelsus-Hospital, Germany</td>
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<tr>
<td>Quality by design approach for tablet formulations and flexible regulatory approach</td>
<td>Julia Y. Ljubimova, Cedars-Sinai Medical Center, USA</td>
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<td>Multifunctional nanoplatforim for biomedical applications</td>
<td>Eggehard Holler, Cedars-Sinai Medical Center, USA</td>
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<td>Role of counterions on protein conformational change in protein-nanoparticles interaction</td>
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<td>Self-care in Keloid management with nanoparticles/microneedles for drug delivery</td>
<td>Xu Chenjie, Nanyang Technological University, Singapore</td>
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<td>Fahima Dilnawaz, Laboratory of Nanomedicine, India</td>
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<td>Potential nanocarriers for topical skin delivery of drugs</td>
<td>Sevgi Gungor, Istanbul University, Turkey</td>
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### Track 3: Nanomedicine (Session 2)

**Session Chair:** Eggehard Holler, Cedars-Sinai Medical Center, USA  
**Session Co-Chair:** David K. Mills, Louisiana Tech University, USA

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### Track 9: Recent Trends in Nanotechnology

**Session Chair:** Gajanan Bhat, University of Tennessee, USA  
**Session Co-Chair:** Hiroaki Tada, Kinki University, Japan

See the full schedule for more details.
Title: Molecular scale first series transition metal oxide cluster-surface modified Titanium (IV) oxide as solar environmental catalyst
Hiroaki Tada, Kinki University, Japan
Title: Meltblowing: A commercially feasible production technology for nanofibers
Benito Coasne, Massachusetts Institute of Technology, USA
Title: Nanobubble assisted changes of surface nanomorphology
Hana Tarabkova, J Heyrovsky Institute of Physical Chemistry, Czech Republic
Title: Graphene / semiconductor nanowire hybrid optoelectronic devices
Lun Dai, Peking University, China
Title: Optoelectronics with nanowires and quantum dots
Hakan Pettersson, Halmstad University, Sweden
Title: Dense packings of hard spheres from sequential deposition: A route to new architecture in the nano-world
Ha-Kei Chan, University of Nottingham, UK
Title: Self-organized organic photonic crystals for laser applications
Seiichi Furumi, National Institute for Materials Science, Japan
Title: Development of a micro-biorobot for drug delivery: Bacterial propulsion of liposomes
Zhenhai Zhang, Beijing Institute of Technology, China
Title: The dual descriptor and its possible use for a rational design of novel molecules with importance in nanoscience and nanotechnology
Jorge Ignacio Martinez-Araya, Universidad Autonoma de Chile, Chile

Track 10: Applications of Nanotechnology
Session Chair: Jaime Rocha-Gomes, University of Minho, Portugal
Session Co-Chair: Robert K. DeLong, Missouri State University, USA
Title: From microcapsules of insect repellent to silica nanoparticles: Evolution in functionalization of textiles
Jaime I. N. Rocha Gomes, University of Minho, Portugal
Title: New THz technologies and applications in support of safety and security
A. Vaseashta, IASC and International clean Water Institute NUARI, USA
Title: Nanocrystalline alloys for remarkable oxidation resistance
R.K. Singh Raman, Monash University, Australia
Title: Characterization of novel RNA, proteinand chimerananoconjugate composites and their potential pre-clinical applications
Robert K DeLong, Missouri State University, USA
Title: Sn-related Group-IV semiconductor materials for electronic and optoelectronic applications
Osamu Nakatsuka, Nagoya University, Japan
Title: Gold nanoparticle/rutile Titanium (IV) Oxide Plasmon photo catalyst as environmental catalyts: Removal of phenol derivatives
Shi-ichi Naya, Kinki University, Japan
Title: Experimental investigation and FE modeling of nanoindentation behavior of Ti-6Al-4V alloy for aero engine components
Adep Kumaraswamy, Defense Institute of Advanced Technology, India
Title: Nanomaterial functionality in polymer electrolyte membranes
Ramesh T. Subramaniam, University of Malaya, Malaysia
Title: Laser-microdissection of protein crystals down to submicron dimensions
Evgenia Pechkova, University of Genova, Italy
Title: Observation of cell growth on the surface-modified TiO2 nanostructures
Shu-Ping Lin, National Chung Hsing University, Taiwan
Title: Superparamagnetic particles and their application in water purification and resources recovery
Karl Mandel, Fraunhofer Institute for Silicate Research ISC, Germany
Title: Medical applicability of bioactive polymer surfaces with DLC and noble metal-doped coatings
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CheolGi Kim, Chungnam National University, Korea

Track 5: Nanodevices and Nanosensors (Session 1)
Session Chair: Dominique Ausserre, Universite du Maine, France
Session Co-Chair: Kohki Mukai, Yokohama National University, Japan
Title: Studies of properties of nanoparticles of dilute magnetic semiconductors
Sushil K. Misra, Concordia University, Canada
Title: Photonic metamaterials for InP-based optical communication devices
Tomohiro Amemiya, Tokyo Institute of Technology, Japan
Title: Template method for nano-order positioning and dense packing of colloidal quantum dots
Kohki Mukai, Yokohama National University, Japan
Title: Planar hall resistance magnetic biosensor with ftempomolar resolution
CheolGi Kim, Chungnam National University, Korea
Title: New anti-reflecting layers for high contrast imaging in biophonic experiments
Dominique Ausserre, Universite du Maine, France
Title: DNA-heatronics: Designing nano-scale thermal devices utilizing the structural transition of DNA
Chih-Chun Chien, Los Alamos National Laboratory, USA

Title: Effects of dilution on particle size measurement in dynamic light scattering
Lily Zu, Sympatec Inc., USA

Title: Towards a carbon nanofiber (CNF) sensor with integrated microfluidics for biomarker detection
Tamura Floyd-Smith, Tuskegee University, USA

Title: CdSe/CdS quantum rods: Highly luminescent nanocrystals with temperature-independent lasing threshold and enhanced two-photon absorption
Iwan Moreels, Istituto Italiano di Tecnologia, Italy

Track 5: Nanodevices and Nanosensors (Session 2)
Session Chair: Arno Ehresmann, The University of Kassel, Germany
Session Co-Chair: Seyed Sadeghi, University of Alabama, USA

Title: Quantum nanosensors based on quantum dot-metallic nanoparticle systems
Seyed Sadeghi, University of Alabama, USA

Title: Static and dynamic local magnetic fields for positioning and controlled movement of small objects
Arno Ehresmann, The University of Kassel, Germany

Title: Continuous glucose monitoring using ZnO nanowire biosensor chip
Jonathan Lloyd, Swansea University, UK

Title: Extraordinary optical transmission (EOT) in tapered nano-hole array for bio-chemical sensors application
Mahmoud Imranejad, University of Waterloo, Canada

Title: Spatially controlled Si-V defect nanodiamonds with nitrogen-enhanced photoluminescence prepared by scanning probe lithography
Shane Aaron Catledge, University of Alabama at Birmingham, USA

Title: Ag-Nanoassemblies as SERS active hotspots for sensory applications
Nekane Guarratxena, ICTP-CSIC, Spain

Title: The quest for logic functionalization of magnetic nanoclusters
Georg Lefkidis, University of Kaiserslautern, Germany

Title: Silicon spin-based quantum information devices
Tetsuo Kodera, Tokyo Institute of Technology, Japan

Title: Optofluidics-based biosensing platform for sensitive and selective detection of trace environmental pollutants
Feng Long, Renmin University of China, China

Track 4: Nanotechnology in Food and Agriculture
Track 7: Nanotechnology in Energy Systems
Track 8: Environment, Health and Safety Issues of Nanotechnology

Session Chair: Bobby Kannan Mathan, James Cook University, Australia
Session Co-Chair: Krishna Feron, CSIRO & University of Newcastle, Australia

Title: Degradation control of biodegradable biomaterials using nanotechnology
Bobby Kannan Mathan, James Cook University, Australia

Title: Nanoparticle organic solar cells
Krishna Feron, CSIRO & University of Newcastle, Australia

Title: Braking of automobiles: A potential source of nanoparticulate emissions
Kukutschova Jana, VSB Technical University Ostrava, Czech Republic

Title: Synthesis and characterization of the surface structure of thin film oxides for use as mixed conductors in electrochemical cells
Stephen Skinner, Imperial College London, UK

Title: Surface structural analyses on elemental ratio and depth profile of Ti metal subjected to heat treatment in N2 atmosphere after alkali and acid treatments
Alireza Valanezhad, Amity University Haryana, India

Title: Innovative energy harvesting nanostructures for organic-based solar cells
Hemali Rathnayake, Western Kentucky University, USA

Title: Hybrid-remediation with nano-size metallic calcium and iron dispersion for detoxification of multi-pollutants containing radioactive cesium, heavy metals and POPs in contaminated soil
Tetsuji Okuda, Hiroshima University, Japan

Title: Novel approach for the extraction and immobilization of radioactive cesium from contaminated fly ash with nanometallic Ca/CaO methanol suspension
Shinivas Reddy Mallampati, University of Ulsan, Korea

Title: Design and performance analysis acrylic coated small scale passive solar air heater
M.T. Naik, JNT University, India

Title: Nanoparticles as novel insecticidal agent for crop protection
Nitai Deb Nath, Amity University Haryana, India

Track 6: Nano-electronics

Session Chair: Alexander Eisfeld, Max-Planck-Institute for the Physics of Complex Systems, Germany
Session Co-Chair: Peter A. Sloan, University of Bath, UK

Title: Recent development of Si chemical dry etching technologies
Toshib Hayashi, Nagoya University, Japan

Title: Rotational motion driven by single electron tunneling
Alexander Eisfeld, Max-Planck-Institute for the Physics of Complex Systems, Germany

Title: Crystal chemistry and band gaps in polycyclic aromatic hydrocarbons: A dispersion corrected DFT investigation
Bohdan Schatschneider, The Pennsylvania State University, USA

Title: Molecular technology for atomic-level precise artificial atom
Norifusa Satoh, National Institute for Materials Science, Japan

Title: Breaking the single atom limit in atomic manipulation: Nonlocal STM induced manipulation on Si(111)-7x7
Peter A. Sloan, University of Bath, UK

Title: Coulomb brocade transport emerged in two dimensional organic polymer layers
Megumu Akai-Kasaya, Osaka University, Japan

Title: Semiconducting nanowires field-effect transistors gated by metal nanowires
Wen Bin Jian, National Chiao Tung University, Taiwan
Keynote Forum

**Introduction**

Sir Harold Kroto
Florida State University, USA

Claudio Nicolini
Nanoworld Institute, Italy

Israel Felner
The Hebrew University, Israel

Satwant Kaur
Hewlett-Packard, USA

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**Track 1: Nanomaterials (Session 1)**

**Session Chair:** Serhii Shafraniuk, Northwestern University, USA

**Session Co-Chair:** Valerie Keller, University of Strasbourg, France

**Session Introduction**

**Title:** Fabrication of carbon fullerene based hard disk unit

Claudio Nicolini, Nanoworld Institute, Italy

**Title:** Different magnetic behaviors of Mg and Zn doped Fe$_2$O$_4$ nanoparticles estimated in terms of crystal domain size, universal dielectric response and application to anodes for lithium ion batteries

Masaru Matsuo, Dalian University of Technology, China

**Title:** Graphene sensing and thermoelectric devices

Serhii Shafraniuk, Northwestern University, USA

**Title:** On the use of nanodiamonds for photocatalytic applications

Valerie Keller, University of Strasbourg, France

**Title:** Memristive metal-insulator switches in correlated electron oxide nanowires using electric field-induced redox reaction

Teruo Kanki, Osaka University, Japan

**Title:** Defects in zinc oxide nanowires: Temperature evolution and the effect on contacts

Richard J Cobley, Swansea University, UK

**Title:** Properties of graphene oxide/thermoplastic starch green nanocomposites

K Madhukar, Osmania University, India

**Title:** Properties and application of doped-SWCNT, doped-CSCNT, and free-standing reduced graphene oxide sheets for energy devices

Elaine Yoshiko Matsubara, Universidade de Sao Paulo, Brazil

**Title:** Facile fabrication of graphene nanoribbon/silicone rubber elastomer for strain sensing

Shang Songmin, The Hong Kong Polytechnic University, Hong Kong

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**Track 1: Nanomaterials (Session 2)**

**Session Chair:** Takehide Miyazaki, AIST, Japan

**Session Co-Chair:** Gerard Tobias, ICMAB-CSIC, Spain

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Title: Structural and electronic Properties of metal endohedral silicon clusters
Takehide Miyazaki, AIST, Japan

Title: Synthesis of sub nano-size metal particles using a nano-reactor
Kimihisa Yamamoto, Tokyo Institute of Technology, Japan

Title: Pressure-induced phase transitions in nanomaterials: A thermodynamics panorama
Denis Machon, University Lyon 1-CNRS, France

Title: Guidelines proposal for nanomaterials hemocompatibility
Julie Laloy, University of Namur, Belgium

Title: 3D Orientation mapping in the transmission electron microscope – 3D-OMiTEM
Soren Schmidt, Technical University of Denmark, Denmark

Title: Carbon nanotube-iorganic nanohybrids
Gerard Tobias, ICMAB-CSIC, Spain

Title: Polymer covalently modified graphene for nonvolatile rewritable memory
Yu Chen, East China University of Science and Technology, China

Title: Selective formation of carbon nanotubes and spherical carbon nanoparticles in molten LiCl
Ali Kamali, University of Cambridge, UK

Title: Lab scale production of nanocrystalline cellulose (NCC) from rice husk biomass
Md Sakinul Islam, RMIT University, Australia

Mendocino

Track 2: Nanostructures
Session Chair: Dave H A Blank, University of Twente, Netherlands
Session Co-Chair: Ho-Kei Chan, University of Nottingham, UK

Title: Materials control on a nanoscale: Artificial oxide structures
Dave H A Blank, University of Twente, Netherlands

Title: The study of nano-scale field emission phenomena
Tsung-Chieh Cheng, National Kaohsiung University of Applied Science, Taiwan

Title: Generation of polymer nanowires by a pulsed laser irradiation
Masahiro Goto, National Institute for Materials Science, Japan

Title: Dense columnar packings of hard spheres- An application to nanotube-confined fullerenes
Ho-Kei Chan, University of Nottingham, UK

Title: Hydride vapor phase epitaxy of III-V semiconductor nanostructures and nanowires
Yamina Andre, Blaise Pascal University, France

Title: Nanostructured self-assembled P3HT thin films and their application to enhance organic solar cell efficiency
Varun Vohra, University of Electro-Communications, Japan

Title: Study of photo catalytic and antibacterial activity of Ag/B/N co-doped TiO2/CNT composite films
Md Nizam Uddin, Shahjalal University of Science and Technology, Bangladesh

Title: NanoSweet: Nanostructured composites of graphene/metal oxides for effective natural gas sweetening
Sunil P Lonkar, The Petroleum Institute, UAE

Title: Investigating the effect of a zeolite and CaCO3 catalyst support on the production of Carbon nanotubes
Diakanua Nkazi, University of Witwatersrand, South Africa

Title: Self-organized synthesis of metal oxide semiconductor nanowire photocatalyst
Kenji Saito, Niigata University, Japan

Title: Microorganism-mediated, surfactant-directed synthesis of metal nanostructures
Jiale Huang, Xiamen University, China

Title: The energy transformation of mono-dispersed nanometer cluster forming process quantum mechanical
Lihong Su, Northwestern Polytechnical University, China

Track 5: Materials Science and Engineering
Session Chair: Tien-Yau Luh, National Taiwan University Taipei, Taiwan
Session Co-Chair: Shady Kamal, National Institute for Standards Giza, Egypt

Title: Ladderphanes
Tien-Yau Luh, National Taiwan University Taipei, Taiwan

Title: Change in the surface morphology of viscose fabrics by exposure to sunlight
Shady Kamal, National Institute for Standards Giza, Egypt

Title: Quantum thermodynamic aspects of magnetic molecules
Georg Lefkidis, University of Kaiserslautern, Germany

Title: NMR techniques for study of physical properties of reduced dimensionality and nano-scale materials
Vesna Mitrovic, Brown University, USA
Session Chair: John F Donegan, Trinity College Dublin, Ireland  
Session Co-Chair: Humberto Terrones, Rensselaer Polytechnic Institute, USA

**Session Introduction**

Title: Inexpensive and accurate – Novel computational methods for prediction of toxicity of nanomaterials  
Jerzy Leszczynski, Jackson State University, USA

Title: A review of physical and chemical routes to top-down nanofabrication  
Ramesh K Agarwal, Washington University in St. Louis, USA

Title: Helium ion microscope generated nitrogen-vacancy centres in type Ia diamond  
John F Donegan, Trinity College Dublin, Ireland

Title: Biomimetics and optical cloaking  
Ashok K. Vaseashta, International Clean Water Institute, USA

Title: Beyond graphene: The amazing world of layered transition metal dichalcogenides  
Humberto Terrones, Rensselaer Polytechnic Institute, USA

Title: Probing the nano-world with light-driven microtools  
Jesper Gluckstad, Technical University of Denmark, Denmark

Title: Wavefunction engineering in graphene systems  
Adelina Ilie, University of Bath, UK

Title: Construction, functionalization, and organization of dendrimer with conjugated backbones  
Masatoshi Kozaki, Osaka City University, Japan

Title: 3D nanostructures for multifunctional plasmonics  
Mario Malerba, Italian Institute of Technology, Italy

Title: Sensing spin and spinning memory: A chiral-based spin sensors and magnetic memory devices without a permanent magnet  
Yossi Paltiel, The Hebrew University, Israel

Title: The role of fast charge dynamics to photo-catalytic water oxidation  
Tanja Cuk, University of California, USA

Title: Continuous-wave pumped lasing using colloidal CdSe quantum wells  
Joel Grim, Istituto Italiano di Tecnologia, Italy

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Day 2  
December 2, 2014  
Sierra-A Ballroom

**Keynote Forum**

Introduction  
Fatih M. Uckun  
Children’s Hospital Los Angeles and USC Keck School of Medicine, USA

Haruo Sugi  
Teikyo University School of Medicine, Japan

Julia Y Ljubimova  
Cedars-Sinai Medical Center, USA

Jean-Paul (Moshe) Lellouche  
Bar-Ilan University, Israel

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Track 3: Nanomedicine (Session 1)  
Session Chair: Eggehard Holler, Cedars-Sinai Medical Center, USA  
Session Co-Chair: Eugenia Pechkova, University of Genova, Italy

**Session Introduction**
Title: Targeted imaging for personalized medicine: New age for combination cancer treatments
Julia Y Ljubimova, Cedars-Sinai Medical Center, USA

Title: Biodegradable nanobrushes for drug delivery
Eggehard Holler, Cedars-Sinai Medical Center, USA

Title: The role of LB thin protein film in protein crystal growth by LB nanotemplate and robot
Eugenia Pechkova, University of Genova, Italy

Title: PMLA nanoconjugates for effective delivery of antisense oligos: optimization, mechanism, and brain tumor treatment
Hui Ding, Cedars-Sinai Medical Center, USA

Title: SERS plasmonic nanotags in biomedical sensing, imaging and therapy
Nekane Guarrotxena, ICP, Spain

Title: Nanosized silver for Cancer
Mark Kester, NanoSTAR Institute of the University of Virginia, USA

Title: Biological kinesin-5 nano-motors: Motile properties and intracellular functions
Leah Gheber, Ben-Gurion University of the Negev, Israel

Title: Synthetic HDL – A mimic of nature’s nanomedicine
Anna Schwendeman, University of Michigan, USA

Title: Micelles as nanosized carriers for skin delivery of drugs
Sevgi Gungor, Istanbul University, Turkey

Title: Tumor regression by means of magnetic drug targeting
W Wagner, Paracelsus-Klinik Osnabrueck, Germany

Track 3: Nanomedicine (Session 2)
Session Chair: Jim Klostergaard, The University of Texas, USA
Session Co-Chair: Jerzy Leszek, Wroclaw Medical University, Poland

Title: Magnetic vectoring for drug delivery to tumors: Past, present and is there a future?
Jim Klostergaard, The University of Texas, USA

Title: Nanodrug delivery of a multimodal novel drug cerebrolysin reduces engineered nanoparticles induced aggravation of heat stroke induced ubiquitin expression and brain pathology
Hari S Sharma, Uppsala University, Sweden

Title: Early detection and treatment of Alzheimer’s disease- Nanotechnology as a tool
Jerzy Leszek, Wroclaw Medical University, Poland

Title: Bioreducible cross-linked polymer coated mesoporous silica nanoparticles for targeted delivery of siRNA and chemotherapeutics to HER2+ breast cancer
Moataz Reda, Oregon Health and Science University, USA

Title: Optimization of particles size for lung specific drug delivery by way of microspheres
Sree Harsha, King Faisal University, Saudi Arabia

Title: Types of self-assembling of lengthy Intron RNA presented in the regions of homologue chromosomes somatic pairing
Viya Fedoseyeva, Russian Academy of Sciences, Russia

Title: In vivo delivery of transcription factors with chemically modified oligonucleotides
Niren Murthy, University of California at Berkeley, USA

Title: Formulation and characterization of dirithromycin nanoparticles for topical treatment
Evrim Yenilmez, Anadolu University, Turkey

Title: Ocular application of dirithromycin with chitosan based polymeric nanoparticles
Ebru Basaran, Anadolu University, Turkey

Title: Strategist PLGA nano-capsules to deliver siRNA for inhibition of carcinoma and neuroblastoma cell lines by knockdown of proto-oncogene
Archana M Raichur, Toyo University, Japan

Title: Testing the efficiency of a hybrid nanoparticulate drug delivery system for use in bone regeneration with distraction osteogenesis
Lamees Nayef, McGill University, Canada
Title: DNA vaccine that target hemagglutinin to MHC II-molecules rapidly induces antibody-mediated protection against influenza
Bjarne Bogen, University of Oslo and Oslo University Hospital, Norway

Title: Rational design of nucleus targeting nano-particles for enhanced intracellular active transport
Rony Granek, Ben-Gurion University of the Negev, Israel

Title: Control of chiral assemblies through hydrogen bonding properties of amino acids
Toshiyuki Moriuchi, Osaka University, Japan

Title: Magnetic iron oxide nanoparticles with hyperthermia-induced drug release ability by using click chemistry
Laurent Fontaine, University of Maine, France

Title: New age pathologists with the synchrotron: How to apply the synchrotron-based X-ray fluorescence analysis to pathological diagnosis
Akihiro Matsuura, Fujita Health University, Japan

Title: Biomedical applications of water soluble fullerenes: How do they work?
Sameh S Ali, Zewail City of Science and Technology, Egypt

Title: In Vivo molecular imaging of retinal vascular disease
Ashwath Jayagopal, Vanderbilt University Medical Center, USA

Title: Hybrid magnetic nanoparticles mediated trimodal lethality: Chemotherapy, photothermal therapy and magnetic hyperthermia
Sivakumar Balasubramaniam, Toyo University, Japan

Title: A clinical trial to evaluate the safety and immunogenicity of a novel DNA vaccine used as immunotherapy during Leishmaniasis
Laura Manna, University of Naples, Italy

Title: Monte Carlo simulation to detect the cancer cells at very early stages of breast cancer using CT images
Zaker Salehi Dehyagani, KDU University, Malaysia

Title: Directed evolution of new viruses for therapeutic gene delivery
David V Schaffer, University of California, USA

Track 8: Environment, Health and Safety Issues of Nanotechnology

Session Chair: Ofir Menashe, Kinneret College on the sea of Galilee, Israel
Session Co-Chair: Eiichiro Ichiishi, International University of Health and Welfare Hospital, Japan

Title: NT4W – Nanotechnology for contamination detection, remediation and water purification
Ashok K Vaseashta, International Clean Water Institute, USA

Title: Trends in diagnostic biochip development
Eiichiro Ichiishi, International University of Health and Welfare Hospital, Japan

Title: The use of constructed nano and micro-filtration membrane as a confine bioreactor for microbial growth and extracellular digestive enzymes secretion
Ofir Menashe, Kinneret College on the sea of Galilee, Israel

Title: Interparticle interactions of different shapes between water molecules
Makoto Yasutomi, University of the Ryukyus, Japan

Title: Nanostructured metal oxides thin films as high-quality humidity sensor
Richa Srivastava, Lucknow University, India

Title: Computational methods for predicting genotoxicity of metal oxide nanomaterials (A classification and regression tree model for predicting comet assay results)
Nazanin Golbamaki, The Mario Negri Institute, Italy

Title: Extraction of toxic and valuable metal ions from used batteries and water-borne microbes from contaminated water using the multifunctional nano composites
Amritvir Kaur, University of Central Lancashire, UK

Title: Biotoxicity of free and chitosan-coated iron nanoparticles in Drosophila melanogaster
Eliza Nuit Jara Negrete, Pontifical Catholic University of Ecuador, Ecuador

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Day 3  December 03, 2014
Sierra-A Ballroom
Track 4: Nanodevices and Nanosensors

**Session Chair:** Jose V Garcia-Ramos, IEM-CSIC, Spain
**Session Co-Chair:** Anne Charrier, Aix-Marseille University, CNRS, France

**Title:** A field effect transistor biosensor with a -pyrone derivative engineered lipid sensing layer for ultrasensitive Fe3+ ion detection with low pH interference
*Anne Charrier, Aix-Marseille University, CNRS, France*

**Title:** BIMENS- Bimetallic nanostars (Ag@Au) with high surface enhanced raman scattering (SERS) performance: Detection of β-amyloid and its marker thioflavin T
*Jose V Garcia-Ramos, IEM-CSIC, Spain*

**Title:** Bridging the gap of low to high hierarchy chemical nanosensor platforms: Recent advancements at NASA Glenn Research Center
*Azlin M. Biaggi-Labiosa, NASA Glenn Research Center, USA*

**Title:** GaAs band gap engineering by colloidal PbS quantum dots
*Bruno Ullrich, Universidad Nacional Autónoma de México, Mexico*

**Title:** Template method for positioning of colloidal quantum dots for optoelectronic device application
*Kohki Mukai, Yokohama National University, Japan*

**Title:** Properties of photonic and plasmonic resonance devices
*Joe Woong Yoon, University of Texas - Arlington, USA*

**Title:** Detection and Identification of microorganisms by nanoparticles based biosensors
*Sam F Y Li, National University of Singapore, Singapore*

**Title:** sxRNA: Using RNA-based, nano-switches to detect novel non-coding RNA expression
*Scott Tenenbaum, SUNY- College of Nanoscale Science and Engineering, USA*

**Title:** Nano-object sensing based on plasmonic superprism and carousel
*Chao-Yi Tai, National Central University, Taiwan*

Track 6: Nanoelectronics

**Title:** Backside antireflecting layer microscopy - Application to graphene imaging
*Dominique Ausserre, Université du Maine, France*

**Title:** What Landauer Limit? Ultra-low power electronics, and the minimum energy for computation
*Gregory L Snider, University of Notre Dame, USA*

**Title:** Physical models of LENR processes using the BSM-SG atomic models
*Stoyan Sarg Sargoytchev, World Institute for Scientific Exploration, USA*

**Title:** Resistive switching in Mott insulators: From phenomenology to Mott memories
*Julien Tranchant, Universite de Nantes, France*

**Title:** High resolution imaging of the chemical reactivity of surfaces by opto-electrochemical microscopies
*Frederic Kanoufi, Universite Paris Diderot, France*

**Title:** Titania nanotubes for energy applications
*Latika Menon, Northeastern University, USA*

**Title:** Structural analysis of aluminum-based hydrides by high intensity neutron total diffraclorometer (NOVA)
*Kazutaka Ikeda, KEK, Japan*

**Title:** A unified conductivity expression for ohmic and space-charge conduction in solid dielectrics
*Ho-Kei Chan, University of Nottingham, UK*

**Title:** Functionalized nanomaterials for specific lanthanide separations and nuclear wastewater treatment
*Md Rabiul Awual, Japan Atomic Energy Agency, Japan*

**Title:** Mass-selected nanoparticles as model catalysts for electrochemical energy conversion
*Ifan E L Stephens, Technical University of Denmark, Denmark*
| Title: Dielectric and magnetic properties of metals doped BiFeO₃ nanoparticles |
|-----------------------------|-----------------------------|
| Bashir Ahmmad, Yamagata University, Japan |

| Title: Selective sleuthing of fluorescent Pseudomonas through ion trafficking across gold-polycarbonate composite nanoporous membrane |
|-----------------------------|-----------------------------|
| Krishna Pal Singh, G.B. Pant University of Agriculture and Technology, India |

| Title: Atomic-scale structural characterization of InAs/GaAs based quantum-dot nanostructures |
|-----------------------------|-----------------------------|
| Shenwei Tan, The University of Sydney, Australia |

| Title: Wide band gap quantum dots sensitized α-Fe₂O₃ thin film for solar generation of hydrogen |
|-----------------------------|-----------------------------|
| Ashi Ikram, Dayalbagh Educational Institute, India |

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**Track-10: Applications of Nanotechnology**

*Session Chair: Aharon Gedanken, Bar-Ilan University, Israel*

*Session Co-Chair: Ryszard Ostaszewski, Institute of Organic Chemistry PAS, Poland*

**Session Introduction**

| Title: Radical reactions with nano-particles suspended in aqueous solutions |
|-----------------------------|-----------------------------|
| Dan Meyerstein, Ariel University, Israel |

| Title: The hospital of the future: Avoiding bacterial infection by making all the textiles antibacterial |
|-----------------------------|-----------------------------|
| Aharon Gedanken, Bar-Ilan University, Israel |

| Title: Stereo selective bionanocatalysis on gold nanoparticles |
|-----------------------------|-----------------------------|
| Ryszard Ostaszewski, Institute of Organic Chemistry PAS, Poland |

| Title: Fast and slow laser light with femtosecond duration of pulse propagating in medium with nanorods due to frequency self-modulation |
|-----------------------------|-----------------------------|
| Vyacheslav A Trofimov, Lomonosov Moscow State University, Russia |

| Title: Evolution of raman spectrum of graphene with thickness of SiO₂ capping layer on Si substrate |
|-----------------------------|-----------------------------|
| Lun Dai, Peking University, China |

| Title: Interfaces and molecular mobility in polymer nanocomposites |
|-----------------------------|-----------------------------|
| Ulrich Scheler, Leibniz-Institut fur Polymerforschung Dresden e. V., Germany |

| Title: Polymeric Lutein nanoparticles as nano nutraceuticals |
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| Aswathy Ravindran Giri, Toyo University, Japan |

| Title: Nanoscience and nanotechnology of transparent electrodes |
|-----------------------------|-----------------------------|
| Daniel Bellet, CNRS - Grenoble INP, France |

| Title: Nanosized precipitates during subsurface oxidation of steels – turning a corrosion problem into a mechanism to increase mechanical properties |
|-----------------------------|-----------------------------|
| Michael Auinger, InnovMath, Austria |

| Title: Wide band gap ZnO nanostructures: Tailoring of defect concentrations for ferromagnetic and gas sensing properties in materials |
|-----------------------------|-----------------------------|
| David E Motaung, Council for Scientific and Industrial Research, South Africa |

| Title: Anaerobic microbial desulfurization of kerosene |
|-----------------------------|-----------------------------|
| Semiu A Kareem, Modibbo Adama University of Technology, Nigeria |

| Title: Effect of nanomaterials on physical and rheological properties of asphalt binder used in Jordan |
|-----------------------------|-----------------------------|
| Mohammad Ali Khasawneh, Jordan University of Science and Technology, Jordan |

| Title: Layer by layer assembly of graphene and ultrathin vanadium pentoxidecoated MWCNTs on textile fabrics for high flexible supercapacitor electrodes |
|-----------------------------|-----------------------------|
| Imran Shakir, King Saud University, Saudi Arabia |

| Title: Phytofabrication of silver nanoparticles using indigenous medicinal plants and analysis of their antimicrobial property |
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**Closing Ceremony**

**Day 1**

**December 01, 2014**

**Poster Presentations Session 1 from P-001-P-030 @ Redwood-Sequoia**
Title: Paclitaxel loaded cationic solid lipid nanoparticle formulation, preparation and evaluation  
Ahmet Alper Ozturk, Anadolu University, Turkey

Title: Production of ion exchange membrane based polystyrene butadiene rubber for hydrogen fuel cell  
Alain I Mufula, University of the Witwatersrand, South Africa

Title: The use of phenylalanine- and polyethylene glycol-modified nano-chitosan in house dust mite allergen immunotherapy  
Amornpun Sereemaspun, Chulalongkorn University, Thailand

Title: Hierarchically ordered porous titano-silicate with mesoporous and microporous pore walls for the oxidation of bulkier organic molecules  
Amritvir Kaur, University of Central Lancashire, UK

Title: Strategist PLGA nano-capsules to deliver siRNA for inhibition of carcinoma and neuroblastoma cell lines by knockdown of proto-oncogene  
Archana M Raichur, Toyo University, Japan

Title: Nanowired antioxidant compound H-290/51 downregulates ubiquitin and heat shock proteins expressions and attenuates exacerbation of spinal cordpathology in diabetic rats following trauma  
Aruna Sharma, Uppsala University, Sweden

Title: Wide band gap quantum dots sensitized $\alpha$-Fe$_2$O$_3$ thin film for solar generation of hydrogen  
Ashi Ikram, Dayalbagh Educational Institute, India

Title: Composition-dependent electrocatalytic properties of copper sulfides and their implication in quantum dot sensitized solar cells  
Chan Sol Kang, Chungnam National University, Korea

Title: An ultrasensitive electrochemical detection of protein molecules via nanoparticle-electrode collisions  
Da Li, Deakin University, Australia

Title: Preparation of oral extended-release formulations containing nanospheres  
Duc P Do, Chicago State University, USA

Title: Formulation development of nanoparticles for cancer therapy  
Duc P Do, Chicago State University, USA

Title: Photocatalytic oxidation of methylene blue dye under visible light by Ni doped Ag$_2$S nanoparticles  
E S Aazam, King Abdulaziz University, Saudi Arabia

Eman ELAshiry, King Abdulaziz University, Saudi Arabia
Title: Structural characterization thin film grown by thermal evaporation of nanocrystalline Cu$_{70}$Fe$_{30}$
Mohammed Azzaz, USTHB, Algeria

Title: Hydrothermal synthesis of hierarchical MoO$_3$-MWCNTs nanocomposites for electrochemical energy storage devices
Muhammad Imran Shakir, King Saud University, Saudi Arabia

Title: Dental pulp revascularization of necrotic permanent teeth with immature apex: 24 month follow up in vivo study
Najat Farsi, King Abdulaziz University, Saudi Arabia

Title: Tissue engineering for immature teeth with apical periodontitis in dogs
Najlaa Alamoudi, King Abdulaziz University, Saudi Arabia

Title: Luminescence properties of pure and doped CaSO$_4$ nanorods irradiated by 15 MeV e-beam
Najlaa D Alharbi, King Abdulaziz University, Saudi Arabia

Title: Photocatalytic activity of N-doped TiO$_2$ produced by sol-gel method and anodizing method in degradation of RO-16
Navid Zanganeh, Mississippi State University, USA

Title: Effect of calcination temperature on CeO$_2$ nanoparticle size distribution synthesized via microemulsion method
Navid Zanganeh, Mississippi State University, USA

Title: Supramolecular complexation between drugs indomethacin, piroxicam and emodin and cucurbit[n]urils on solution and adsorbed on silver nanoparticles
Paz Sevilla, Universidad Complutense de Madrid, Spain

Title: Biodegradable core-shell polymeric nanostructures as oral delivery carrier for cromolyn sodium
Ravi R Patel, Indian Institute of Technology, India

Title: Theranostic approach of hyaluronic acid-based nanoparticle
Reju George Thomas, Chonnam National University, USA

Title: Pyridylimine cobalt (II) and nickel (II) complex-functionalized multi-walled carbon nanotubes and their catalytic activities for ethylene oligomerization
Saad M. Alshehri, King Saud University, Saudi Arabia

Title: Intranasal delivery of asenapine loaded nanostructured lipid carriers for treatment of schizophrenia
Sanjay Kumar Singh, Indian Institute of Technology, India

Title: PLASENS - Plasmonic nanoparticles for surface-enhanced Raman pesticide sensing inside interparticle hot spots created by dithiols
Santiago Sanchez-Cortes, Instituto de Estructura de la Materia, Spain

Title: Capillary force model to express bonding between two velcro-like surfaces at ambient environment
Shervin Keshavarzi, Furtwangen University, Germany

Title: Environmental reliability study of solution processed oxide transistor
Sung-Jin Kim, Chungbuk National University, South Korea

Title: Synthesis and electrochemical analysis of molybdenum sulfide promoted by various metals for hydrogen evolution reaction
Taewoo Kim, Inha University, Korea

Title: The facile synthesis of Pdnanoflowers with excellent catalytic activity towards CO oxidation: Effect of process parameters
Tareque Odoom-Wubah, Xiamen University, China

Title: Green preparation of carbon-silica composites
Tengyao Jiang, The University of York, UK

Title: Polarization dependent interaction of plasmonic nanoparticles on semiconductor surface
Tibor Gal, Budapest University of Technology and Economics, Hungary

Title: Preformulation study of olopatadine hydrochloride for the treatment ocular allergy
Umay Merve Guvea, Anadolu University, Turkey

Title: Microstructures, thermal and electrical properties of poly(phenylene sulfide)/carbon nanotube nanocomposite films
Young Ju Kim, Chungnam National University, Korea

Title: Solute concentration-dependent contact angle hysteresis and evaporation stains
Yueh-Feng Li, National Central University, Taiwan

Title: Fabrication of InAs/AIAsbGaSb TFETs by using HSQ as a mechanical support
Yuping Zeng, University of California at Berkeley, USA
Keynote Forum

Introduction

Ashok Vaseashta
Institute for Advanced Sciences Convergence & International Clean Water Institute, USA

Carlo Montemagno
Alberta Ingenuity Lab, Canada

Fang Xie
Imperial College London, UK

Track 1: Nanomaterials
Track 2: Nanostructures

Session Chair: Carlo Montemagno, Alberta Ingenuity Lab, Canada
Session Chair: R M G Rajapakse, University of Peradeniya, Sri Lanka

Session Introduction

Title: Low-cost clay-polymer nanocomposites as oxygen reduction catalysts for fuel cell applications
R M G Rajapakse, University of Peradeniya, Sri Lanka

Title: Synthesis and photopolymerization of C_{60} fullerene nanowhiskers
Kun'ichi Miyazawa, National Institute for Materials Science, Japan

Title: Friedel-Crafts alkylation on mesoporous W-Zr composite oxide catalysts prepared by a wall ion-exchange method
Masakazu Iwamoto, Chuo University, Japan

Title: Characterization, mechanical and thermochemical properties of 2D carbon-based nanomaterials studied by calorimetry and thermal analysis
Kristina Lilova, Setaram Inc., USA

Title: Hybrid nanofibers of TiO$_2$-silicone and TiO$_2$-Ag-silicone for high water flux photocatalytic degradation of dairy effluent
Muzafar A Kanjwal, Technical University of Denmark, Denmark

Title: Semiconducting SWCNT: From materials to thin film transistors
Zhao Li, National Research Council of Canada, Canada

Title: Synthesis and characterization of Strontiumzinc oxide nanocomposite via soft chemical process
Etakula Nagabhushan, Osmania University, India

Title: Bioinspired surfaces with gradient micro- and nanostructures to control wettability
Yongmei Zheng, Beihang University, China

Title: Carbon nanotube toxicity: In-situ imaging method using peapods to evaluate the biokinetics of carbon nanotubes
Naoto Saito, Shinshu University, Japan

Title: Control of optical properties of oxynitride pigments through stoichiometries
Toshihiro Moriga, Tokushima University, Japan

Young Researchers Forum
Title: Ultra-durable rotary nanomotors assembled from nanoentities by electric fields
Jianhe Guo, University of Texas, USA

Title: PLA/GNP/NHA- Application of poly-lactic acid reinforced with graphene nanoplatelets and nano-hydroxyapatite hybrids in load bearing bone implants
Feven Mattews Michael, University of Nottingham, Malaysia

Title: On the mechanics of nanomaterials in micro-/nano-scale applications
Mohammed Ibrahim Shaat, New Mexico State University, USA

Day 2 November 17, 2015
Texas A

Keynote Forum

Introduction
Gerd Kaupp
University of Oldenburg, Germany
Yutaka Ohno
Nagoya University, Japan

Track 3: Nanomedicine
Track 4: Nanodevices & Nanosensors

Session Chair: William E Lee, Defence Research and Development, Canada
Session Co-Chair: Hari S Sharma, Upasala University, Sweden

Session Introduction

Title: Nanotechnology-enhanced biosensors for pathogen detection
William E Lee, Defence Research and Development, Canada

Title: Early detection and treatment of Alzheimer’s disease- Nanotechnology as a tool
Jerzy Leszek, Wrocław Medical University, Poland

Title: Determining the DNA binding properties of nanoscale ruthenium dumbbells using optical tweezers
Thayaparan Paramanathan, Bridgewater State University, USA

Title: Characterization of multimodal silica nanoparticles for nanomedicine
Benezra M, Sloan Kettering Institute, USA

Title: Superior neuroprotective effects of TiO2 nanowired cerebrolysin vs. Poly (D,L-lactide-co-glycolide) nanoparticles loaded delivery in Alzheimer’s disease brain pathology
Hari S Sharma, Uppsala University, Sweden

Title: Structuring of nanoporous powders into hierarchically porous nanostructured adsorbents for decarbonization
Farid Akhtar, Luleå University of Technology, Sweden

Title: Measurement of biomagnetic field in cell tissues utilizing pT resolution micro magnetic sensor based on magnetoimpedance element.
Tsuuyoshi Uchiyama, Nagoya University, Japan

Track 5: Materials Science & Engineering
Track 6: Nanoelectronics
Track 7: Nanotechnology in Energy Systems

Session Chair: Gerd Kaupp, University of Oldenburg, Germany
Session Co-Chair: Hiroaki Suzuki, University of Tsukuba, Japan

Session Introduction

Title: Electrochemical autonomous microfluidic devices for analytical applications
Hiroaki Suzuki, University of Tsukuba, Japan

Title: Tuning photophysical and electrochemical properties of cationic iridium (III) complexes based on 4-methoxyphenylvinylquinolines for organic light emitting devices for lighting
Adewale O Adeloye, Botswana Institute for Technology Research and Innovation, Botswana

Title: Energy harvesting device with nanofluidic reverse electrodialysis
Daejoong Kim, Sogang University, Republic of Korea

Title: Innovative BioMEMS devices leveraging nanofluidic control for drug delivery and cell transplantation
R Lyle Hood, Houston Methodist Research Institute, USA

Young Researchers Forum
Title: Coaxial electrospinning of PCL/GT hybrid fiber for encapsulation and controlled release of doxycycline  
Abdurizzagh Khalf, Oklahoma State University, USA  
Title: Nano-emulsions for targeted biomedical imaging  
Mohamed Attia, University of Strasbourg, France  
Title: Accurate modeling and analysis of mechanical nano-resonators  
Mohammed Ibrahim Shaat, New Mexico State University, USA  
Title: Nanoparticles application for enhanced oil recovery  
Maje Alhaji Haruna, University of Leeds, UK  

Workshop  
Title: Business Decisions, Marketing and Nanotek  
Mohammed Basheer Ahmed Khan, Pondicherry University, India  

Poster Presentations  
Title: Nanowired delivery of cerebrolysin reduces Alzheimer’s disease pathology following amyloid beta infusion aggravated by concussive head injury.  
Aruna Sharma, Uppsala University, Sweden  
Title: Field enhancement using plasmonic nano-structures  
Khaled Hassan Baz, Alexandria University, Egypt  
Title: Field enhancement using quantum dot arrays  
Khaled Hassan Baz, Alexandria University, Egypt  
Title: Functional silk-like fibers  
Daiwen Yang, National University of Singapore, Singapore  
Title: Using intruded nano-catalysts to nano-oxidation pattern by atomic force microscope  
Shao-Chin Tseng, National Synchrotron Radiation Research Center, Taiwan  
Title: Continuous flow process for the scalable production of cellulose nanocrystals  
Soon Yee Liew, University of Nottingham, UK  
Title: Effect of synthesis condition on mesoporous silica from elephant grass via solgel on its morphology and its application in adsorption of cationic dyes  
Samson Akpotu, University of KwaZulu Natal, Durban  
Title: Effect of multi-walled carbon nanotubes in three different dispersants on MC3T3-E1 cell line proliferation  
Hisao Haniu, Shinshu University, Japan  
Title: Plasmon metal enhanced titanium dioxide photo-catalyst nanoparticles for the removal of organics in water  
Pardon Nyamukamba, University of Fort Hare, South Africa  

Day 3 November 18, 2015  
Texas A  

Keynote Forum  
Hari S Sharma  
Uppsala University, Sweden  
Aman Ullah  
University of Alberta, Canada  

Track 8: Environment, Health and Safety issues of Nanotechnology  
Track 9: Recent Trends in Nanotechnology  
Track 10: Applications of Nanotechnology  
Track 11: Biomedical Engineering and Application  
Session Chair: Hari S Sharma, Uppsala University, Sweden  
Session Co-Chair: Benezra M, Sloan Kettering Institute, USA  

Session Introduction  
Title: Synthesis and reactivity of Au/g-C, N/TiO, nanocomposites for water-splitting and H production under solar light illumination  
Valerie Keller, University of Strasbourg, France  
Title: Conversion of oils into monomers and nanocomposites  
Aman Ullah, University of Alberta, Canada  
Title: Theoretical investigation on heterogeneous photocatalytic systems containing metal oxide and aqueous solution  
Mitsutake Oshikiri, National Institute for Materials Science, Japan  
Title: Study of bio-distribution of encapsulated ytterbium nanoparticles for solid tumors treatment in mice  
Navideh Aghaei Amirkhizi, Islamic Azad University, Iran  

Awards & Closing Ceremony
Keynote Forum

Introduction
Ashok Vaseashta
Claflin University, USA

Hari Shanker Sharma
Uppsala University, Sweden

Mahi R Singh
Western University, Canada

Track 1: Advanced Nanomaterials
Session Chair: Sabyasachi Sarkar, Indian Institute of Engineering Science and Technology, India

Session Introduction
Title: Synthesis of subnano-size metal particles using a nano-reactor
Kimihisa Yamamoto, Tokyo Institute of Technology, Japan

Title: Well-defined thermoresponsive polymers as injectable gels
Theoni K Georgiou, Imperial College London, UK

Title: Long, 140 ns electron spin lifetime in chemically synthesized graphene and related nanostructures and its strong interplay between the surface bound oxygen
Balint Nafradi, Ecolepolytechniquefederale de Lausanne EPFL, Switzerland

Title: Photodynamic therapy of upconversion nanoparticles prepared by laser ablation in liquid
Hiroyuki Wada, Tokyo Institute of Technology, Japan

Title: Channel length modulation effect on monolayer graphene nanoribbon field effect transistor
Mehdi Saeidmanesh, UniversitiTeknologi Malaysia, Malaysia

Track 2: Nanomaterials Fabrication, Characterization and Tools
Session Chair: Michael Hietschold, Technische Universität Chemnitz, Germany

Session Introduction
Title: Hierarchical nano- or bio-composites based on magnetic nanostructures
Beata Kalska-Szostko, University of Bialytsk, Poland

Title: Application of a difference electron nanoscope (DEN): correlation between 3D magnetical structures of synthetic fayalite with synchrotron and neutron diffraction and mössbauer spectroscopy part II
Werner Lottermoser, Salzburg University, Austria

Title: Usefulness of galvanic displacement reactions to efficiently fabricate metal nanostructures for surface-enhanced spectroscopy
Yuko S Yamamoto, Kagawa University, Japan

Title: Pattern control in molecular self-assembly
Michael Hietschold, Technische Universität Chemnitz, Germany

Title: Characterization of nanodosimeter for real time measurements in radiotherapy and medical physics
Abdulhamid Chaikh, Grenoble University Hospital, France

Title: Low cost fabrication of organic semiconductor monolayer via Organic Solid-Solid Wetting Deposition (OSWD): Physico-chemical basics, controllability, process capability
Alexander Eberle, Ludwig Maximilian University of Munich, Germany
### Track 3: Nanoscale Electronics

**Session Chair:** Shashi Paul, De Montfort University, UK  
**Session Co-Chair:** Takashi Tokumasu, Tohoku University, Japan

- **Title:** Large scale molecular simulations for transport phenomena in polymer electrolyte fuel cell  
  Takashi Tokumasu, Tohoku University, Japan
- **Title:** Printed nanomaterial-based flexible device sheet  
  Kuniharu Takei, Osaka Prefecture University, Japan
- **Title:** Rare-earth-element free luminescent materials for warm white LEDs  
  Ching-Fuh Lin, National Taiwan University, Taiwan
- **Title:** Growth and surface engineering of Si nanowires for opto-electronic applications  
  Muhammad Y Bashouti, Max-Planck Institute for the Science of Light, Germany
- **Title:** Thermometry at the nanoscale  
  Carlos D S Brites, Aveiro Institute of Materials, Portugal

### Track 4: Nanotech for Energy and Environment

**Session Chair:** Shashi Paul, De Montfort University, UK  
**Session Co-Chair:** Takashi Tokumasu, Tohoku University, Japan

- **Title:** Advanced electrode materials for hybrid energy storage  
  Pedro Gomez-Romero, Institut Catala de Nanociencia i Nanotecnologia, Spain
- **Title:** In-situ scattering experiment and structural analysis of hydrogen storage materials by high intensity neutron total diffractometer (NOVA)  
  Kazutaka Ikeda, High Energy Accelerator Research Organization (KEK), Japan
- **Title:** Synthesis and reactivity of AU/G-C₃N₄/TIO₂ nanocomposites for water-splitting and H₂ production under solar light illumination  
  Valérie KELLER, University of Strasbourg, France

### Track 5: Nanotech in Life science and Medicine

**Session Chair:** Hari Shanker Sharma, Uppsala University, Sweden  
**Session Co-Chair:** Hussein O Ammar, Future University, Egypt

- **Title:** New trends in nanotechnology-based targeted drug delivery systems  
  Hussein O Ammar, Future University, Egypt
- **Title:** Multiplex targeted disease biomarker detection using SERS probes  
  Nekane Guarrotxena, Institute of polymer science and technology, Spain
- **Title:** Magnetophoretic circuits for digital cells on chip  
  CheolGi Kim, DGIST, Republic of Korea
- **Title:** Ligand-free alloy nanoparticles for applications in nano-toxicological assays  
  Christoph Rehbock, University of Duisburg, Germany
- **Title:** New routes in treating brain disorders  
  Sylvia Wagner, Fraunhofer Institute for Biomedical Engineering (IBMT), Germany
- **Title:** Functionalized polymeric electrospun nanoscaffolds for bone regeneration and tissue healing  
  Anand Gadre, University of California, USA
- **Title:** SERS-based femto-sensitive nanosensor for protein detection  
  Nekane Guarrotxena, Institute of polymer science and technology, Spain
- **Title:** Cytotoxicity of silver nanoparticles synthesized by catharanthus roseus aqueous extract on jurkat and HT29 cancer cell lines  
  Nor Hazwani Ahmad, Universiti Sains Malaysia, Malaysia
- **Title:** Nano carbon onions cross blood brain barrier with potential to entrap and release alzheimer drug  
  Sabyasachi Sarkar, Indian Institute of Engineering Science and Technology, India
- **Title:** Preparation and characterization of dexketoprofen tromethamol loaded eudragit® Rs 100 nanoparticles  
  Ahmet Alper Ozturk, Anadolu University, Turkey

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**Poster Presentation Session**
Title: Nanoparticles exacerbate sleep deprivation induced brain pathology and functional disturbances. Neuroprotective effects of TiO\(_2\) nanowired delivery of 5-HT3 receptor antagonist ondansetron
Aruna Sharma, Uppsala University, Sweden

Title: Lattice boltzmann modeling of random nano-transport phenomena in highly disordered carbon felt composite layers
Sukkee Um, Hanyang University, S. Korea

Title: Novel Pd/CaSn(OH)\(_6\) nanocomposite prepared by modified sonochemical method for photocatalytic degradation of methylene blue dye
E S Baeissa, King Abdulaziz University, Saudi Arabia

Title: Fixed-dose combination of a nanodrug and a quinoline moiety-containing compound
G Linden, Teva Pharmaceutical Industries Ltd., Israel

Title: Surface and porous properties of polynaphthylamine/Fe\(_3\)O\(_4\) composite and the arsenic adsorption capacity in wastewater
Tran Minh Thi, Hanoi National University of Education, Vietnam

Title: Functionalised dextran nanoparticles for drug delivery to the brain
Daniel Ibegbu, University of Portsmouth, UK

Title: Surface and porous properties of polynaphthylamine/Fe\(_3\)O\(_4\) composite and the arsenic adsorption capacity in wastewater
Tran Minh Thi, Hanoi National University of Education, Vietnam

Title: Functionalised dextran nanoparticles for drug delivery to the brain
Daniel Ibegbu, University of Portsmouth, UK

Title: Fabrication and characterization of chromium-iron oxide (Cr\(_2\)Fe\(_6\)O\(_{12}\)) nanoparticles by thermal treatment method
Mahmoud Goodarz Naseri, Malayer University, Iran

Title: On the correct form of the nonlinear optical susceptibility in strongly-driven semiconductor quantum dots
John Boviatsis, Technological and Educational Institute of Western Greece, Greece

Title: Ion-synthesized of porous silicon with silver nanoparticles. Andrey Stepanov, Kazan Physical-Technical Institute of Russian Academy of Sciences, Russian Federation

Title: Catalytic decolorization of Acid blue 29 dye by H\(_2\)O\(_2\) and a heterogeneous catalyst
Ibrahim A Salem, Tanta University, Egypt

Title: Defect-induced plating of lithium metal within porous graphene networks
Osman Eksik, Istanbul Technical University, Turkey

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Day 3  August 13, 2015
Raume/Room-5

Workshop on “New understandings on the physical and mechanical properties of materials using computational and experimental nanotechnology”
S. Joseph Antony, University of Leeds, UK

Track 8: Terahertz Nanoscience

Session Chair: Masayoshi Tonouchi, Osaka University, Japan
Session Co-Chair: Iwao Kawayama, Osaka University, Japan

Title: Introduction to terahertz nanoscience
Masayoshi Tonouchi, Osaka University, Japan

Title: Absorption and desorption dynamics of gas molecules on 2D nanomaterials observed by terahertz spectroscopy
Iwao Kawayama, Osaka University, Japan

Title: Plasmon-resonant terahertz emitters and detectors and their system applications
S Boubanga Tombet, Tohoku University, Japan

Title: Terahertz interactions in graphene: consequences for ultra-high-speed electronics
Dmitry Turchinovich, Max Planck Institute for Polymer Research, Germany

Title: Field-resolved multi-terahertz nano-spectroscopy
Max Eisele, University of Regensburg, Germany

Track 6: Nanotechnology safety
Track 7: Nano Applications

Session Chair: Valérie KELLER, University of Strasbourg, France
Session Co-Chair: S Joseph Antony, University of Leeds, UK

Title: Growth of silicon nano-structures at low temperature and their application in electronic and energy related devices
Shashi Paul, De Montfort University, UK
Title: ZnO nanoparticles toxicity studied on isolated heart model nanotechnology safety, nanotoxicology
Tamara Milivojević, University of Ljubljana, Slovenia
Title: Daily used nanoparticles increases the incidence of cancer
Hanan Ramadan Hamad Mohamad, Cairo University, Egypt
Title: Amphiphilic polymeric nanoparticles for drug delivery
AmanUllah, University of Alberta, Canada
Title: Design and characterisation of a novel T-shaped nano-antenna on diamond like carbon material
Ahmad Bahar, De Montfort University, UK

Award & Closing Ceremony
**Keynote Forum**

**Title:** Nanoclay minerals and plastics: tiny particles deliver big impact  
**Suprakas Sinha Ray,** Chief Research Scientist and Director, DST-CSIR National Centre for Nanostructured Materials, South Africa

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**Track 1: Nanomaterials Particles and Applications**  
**Track 4: Nano Electronics**  
**Track 5: Molecular Nanotechnology**  
**Track 9: Reinforcements in Nanotechnology**

**Session Chair:** Bonex W Mwakikunga, DST/CSIR National Centre for Nano-Structured Materials, South Africa  
**Session Co-chair:** Annie Chimphango, Stellenbosch University, South Africa

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**Title:** Preparation of Au/silica/cellulose nanoparticle colloid solution and its use in X-ray imaging process  
**Yoshio Kobayashi,** Ibaraki University, Japan

**Title:** Polymer nanofibers for desulfurization of fuels  
**Zenixole R Tshentu,** Nelson Mandela Metropolitan University, South Africa

**Title:** Graphene and Titanium dioxide based hybrid materials as photoelectron catalytic systems  
**Rodrigo Segura,** Valparaiso University, Chile

**Title:** Nanoscale sovereignty for waste water remediation  
**Shivani Bhardwaj Mishra,** University of South Africa, South Africa

**Title:** Water Purification using Nanotechnology  
**Arjun Maity,** DST/CSIR Innovation Centre, South Africa

**Title:** Comparison of morphological properties of xylan nanohydrogels produced by enzymatic and chemical methods  
**Annie Chimphango,** Stellenbosch University, South Africa

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**Panel Discussions**  
**Group Photo**

**Title:** Microneedles from fishscale nanocellulose blends using low temperature mechanical press method  
**Olatunji Ololade,** University of Lagos, Nigeria

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**Young Researchers Forum**

**Session Judge:** Martin Falk, Institute of Biophysics of ASCR, Czech Republic  
**Session Judge:** Genene Tessema Mola, University of KwaZulu-Natal, South Africa

**Title:** Looking for quantum size effects in Zr-Pb-O\(_2\) one dimensional nanorods  
**K Kaviyarasu,** University of South Africa, South Africa

**Title:** Characteristics of Colloidal Ag Nanoparticles in Polyvinyl Alcohol with Different Molecular Weight  
**Bella Mellisani,** Gadjah Mada University, Yogyakarta, Indonesia.

**Title:** Gas Sensing Properties of VO\(_2\) –Vanadium Dioxide Nanobelts: Strongly Correlated Materials in Low Dimension  
**Aline Simo,** University of South Africa, South Africa

**Title:** Biosynthesis of NiO nanoparticles using Callistemon viminali’s extracts & their potential for pseudocapacitor applications  
**Bertrand Tumbain Sone,** University of the Western Cape, South Africa
Title: Sorption of NO, CO and CH₄ on Indium Phosphide Nanowires Supported with Molecular Modelling
Sanele Nyembe, University of Witwatersrand, South Africa
Title: Facile method on fabrication of mixed phase bimetallic nanostructures with high activity for electrocatalytic application
Nolubabalo Matinise, iThemba LABS-National Research Foundation, South Africa
Title: Application of punica granatum L functionalised bimetallic nanooxides on PVP with high catalytic activities via facile green process
Xolile Fuku, University of South Africa, South Africa
Title: Iron oxide/phthalocyanine composites for electrochemical detection of heavy metals
Denisha Gounden, University of Kwa Zulu-Natal, South Africa
Title: Aqueous Synthesis of Copper Sulphide Nanoparticles for Biological Applications
Phumlaani Tetyana, Mintek Nanotechnology Innovation Centre, South Africa
Title: X-ray diffraction and band gap studies of bimetallic silver-platinum nanoparticles
Fredrick O Okumu, Cape Peninsula University of Technology, South Africa

Panel Discussions

Day 2 June 21, 2016
Central 1

Keynote Forum

Introduction
Title: The Nanowire-based Breath Analyser Technology for Disease Detection
Bonex W Mwakikunga, Principal Researcher, DST/CSIR National Centre for Nano-Structured Materials, South Africa
Title: Novel Black Selective Solar Absorbers For High Temperature Concentrated Solar Power Applications
Malik Maaza, UNESCO UNISA Africa Chair in Nanosciences & Nanotechnology, South Africa

Track 2: Nanoscience & Technology
Track 3: Nano Medicine
Track 6: Nanotechnology in Energy Systems
Track 7: Emerging Areas of Nanotechnology
Track 8: Nano Applications

Session Chair: Zhypargul Abdullaeva, Kumamoto University, Japan
Session Co-Chair: Amr Tayel, The American University in Cairo, Egypt

Session Introduction
Title: Solvothermal synthesis of Graphene, carbon-based Nanoparticles, Characterization, study their properties and Applications
Zhypargul Abdullaeva, Kumamoto University, Japan
Title: The mechanism of metal nanoparticle-mediated radiosensitization of tumor cells may be independent of DNA damage amplification and DNA repair inhibition
Martin Falk, Institute of Biophysics of ASCR, Czech Republic
Title: Artificial Photosynthesis: Solar Light Driven Selective Methanol Production by CO₂ Reduction
Young Soo Kang, Sogang University, South Korea
Title: Biosensing Applications of Upconverting Lanthanide Nanophosphors
Kelgenbaeva Zhazgul, Kumamoto University, Japan
Title: Effect of solvent additives in nano-scale morphology of thin film organic solar cell
Genene Tessema Mola, University of KwaZulu-Natal, South Africa
Title: Nanofluids and the Research Opportunities
Mohsen Sharifpur, University of Pretoria, South Africa
Title: Nanostructured LiMnO₂ cathode materials for efficient lithium ion battery energy storage systems
Mesfin Abayneh Kebede, The Council for Scientific and Industrial Research (CSIR), South Africa
Title: TiO₂-Graphene Oxide (GO) Nanocomposites: Synthesis, Environmental Applications and Surface Characterization using Perichromism
Amr Mohamed Tayel, The American University in Cairo, Egypt
Title: High performance supercapacitor based on 3D graphene nanocomposite
Saleh Khamlich, iThemba LABS-National Research Foundation, South Africa.
### Young Researchers Forum

**Session Judge: Mesfin Abayneh Kebede**, The Council for Scientific and Industrial Research (CSIR), South Africa  
**Session Judge: Kelgenbaeva Zhazgul**, Kumamoto University, Japan

**Title: Bimetallic nanoparticles by solvothermal synthesis**  
Chloë Oakland, The University of Manchester, UK

**Title: Detection of aqueous uranyl (VI) species using rare-earth upconversion nanophosphors**  
Aruna Reddy, The University of Manchester, UK

**Title: Order-disorder on the nanostructures on the ocellus of the Caligo memnon (C & R elder[1867]) butterfly**  
Juliet Sackey, University of South Africa, South Africa

**Title: Linear polyamidoamine Conjugate Containing Pamidronate and Platinum Drug: Characterization and In Vitro Cytotoxicity**  
Abongile Ndadame, Tshwane University of Technology, South Africa

**Title: Surface modification and oxidation of vanadium thin film using femtosecond laser**  
Lebogang Kotsedi, University of South Africa, South Africa.

### Video Presentations

**Title: Heating and melting induced by surface plasmon on a metal**  
Peng-Sheng Wei, National Sun Yat-Sen University, Taiwan

**Title: AFM investigation of DNA and their interaction with MCM protein complex**  
Amna Abdalla Mohammed Khalid, Trieste University, Italy

**Title: Effects of Gold Nanoparticles on Marine Species**  
Maria de Lourdes Pereira, University of Aveiro, Portugal

### Poster Presentations

**Poster Judge: Zhypargul Abdullaeva**, Kumamoto University, Japan  
**Poster Judge: Saleh Khamlich**, iThemba LABS-National Research Foundation, South Africa

**Title: Interconnecting Ag-NWs by argon ion beam irradiation**  
Shehla Honey, Nanosciences African Network, South Africa

**Title: 3D simulations of F-N-electron emission in scanning probe lithography (SPL)**  
Steve Lenk, Technical university Ilmenau, Germany

**Title: Covalent functionalisation of Lanthanide nanoparticles**  
Letitia Burgess, The University of Manchester, Manchester, UK

**Title: Electrodeposited Ni Nanowires-Track Etched PET Composites As Selective Solar Absorbers**  
Lukhwa Rendani, University of South Africa, South Africa

**Title: Green Biosynthesis Of Rhodium Nanoparticles Via Aspalathus Linearis Natural Extract**  
Enas Ismail, University of South Africa, South Africa

**Title: Variational formulation and solution for buckling of elastically restrained nonlocal carbon nanotubes under distributed axial loads**  
Mouafou Teifouet Armand Robinson, University of KwaZulu-Natal, South Africa

**Title: Properties of the ‘Laser treated tubular cobalt-alumina nanocomposite’ Selective solar absorber**  
Angela Karoro, iThemba LABS, South Africa

**Title: Green Synthesis of Metal Oxides using plant extracts**  
Hamza Elsayed Ahmed Mohamed, University of South Africa, South Africa

**Title: Biosynthesis, optimisation and characterisation of gold nanoparticles using fungal extracts**  
Ruqsar Bibi Ismail, University of KwaZulu-Natal, South Africa

**Title: Synthesis of ZnO nanoparticles by a green process and the characterization of their physical properties**  
Takalani Nethavhanani, iThemba LABS, South Africa

**Title: Silver Nanowires Dispersed Nanofluids for Concentrated Solar Power Application**  
Touria Khamliche, University of South Africa, South Africa

**Title: Green synthesis of Cerium oxide Nanoparticles by Hibiscus sabdariffa flower natural extract: Main physical properties**  
Zamavezi Kweyama, iThemba LABS, South Africa

### Award & Closing Ceremony
Keynote Forum

Title: Dilemma between ISO and physics in (nano)inden
Gerd Kaupp, University of Oldenburg, Germany

Pannel Discussion

Title: Investigation of Ultrathin Periodically Ordered Adsorbate Films with Controlled Polymorphism and Induced Surface Reactions
Michael Hietschold, Technische Universität Chemnitz, Germany
Title: Microtubular nanomembrane architectures: From 3D assembly to paradigm shifting technologies
Oliver G Schmidt, IFW Dresden, Germany
Title: Nano- and micro-structures fabricated with femtosecond lasers
Xuewen Shu, Huazhong University of Science and Technology, China

Group photo

Sessions:

Session Chair: Gerd Kaupp, University of Oldenburg, Germany
Session Co-Chair: Jörg Kröger, Technical University of Ilmenau, Germany

Session Introduction

Title: In situ investigations of particle-mediated crystal growth
Dongsheng Li, Pacific Northwest National Laboratory, USA
Title: Influence of synthesis parameters on size, shape, composition and magnetic properties of transition metal oxide nanoparticles
Aladin Ulrich, University of Augsburg, Germany
Title: Self-cleaning coatings based on nano-structured ZnO
Dominic Tessier, CTT Group, Canada
Title: Printable holograms and nanophotonic devices via laser ablation
Haider Butt, University of Birmingham, UK
Title: Manipulating and characterizing matter at the atomic scale
Jörg Kröger, Technical University of Ilmenau, Germany
Title: Nanographene device design
Y. Hancock, University of York, UK
Title: Hydroxyapatite based nanostructures for efficient treatment of lead containing waste water
Uma Batra, PEC University of Technology, India

Young Research Forum
<table>
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<tr>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
<th>Country</th>
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<tbody>
<tr>
<td>Inkjet printing of Redox-based resistive switching memory</td>
<td>Bernhard Huber</td>
<td>Munich University of Applied Sciences</td>
<td>Germany</td>
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<tr>
<td>Geometry induced doping in thin Si Nano-grating layers</td>
<td>Mikheil Mebonia</td>
<td>Ilia State University</td>
<td>Germany</td>
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<tr>
<td>Studies of stiction between MEMS microgear teeth by multilevel hierarchical models</td>
<td>Nabeel Almuramady</td>
<td>Cardiff University</td>
<td>UK</td>
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<tr>
<td>Studies of actual shapes of probes used for AFM tip-based nanomachining</td>
<td>Zaynab Naif Alraziqi</td>
<td>Cardiff University</td>
<td>UK</td>
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**Panel Discussion**

**August 02, 2016   Day 2**

**Rosewood Room**

**Keynote Forum**

<table>
<thead>
<tr>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Dynamic defect-manipulation induced novel functionality in SnO2</td>
<td>Yuko S Yamamoto</td>
<td>Kagawa University</td>
<td>Japan</td>
</tr>
<tr>
<td>Novel Nanocrystalline Bioactive Coatings For Ti6Al4v Bio-Implants</td>
<td>Uma Batra</td>
<td>PEC University of Technology</td>
<td>India</td>
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<th>Title</th>
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</tr>
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<tbody>
<tr>
<td>Combined delivery of BMP-6 and PDGF-BB From Chitosan Scaffolds for osteoblastic differentiation</td>
<td>Eda GOZ</td>
<td>Ankara University</td>
<td>Turkey</td>
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<tr>
<td>Targeted cancer therapy using Nano-Micelles Made of natural bio-compatible materials</td>
<td>Fatemeh Bahadori</td>
<td>Bezmialem Vakif University</td>
<td>Turkey</td>
</tr>
<tr>
<td>Lanthanides doped upconversion metal oxide nanocomposites for solar cell application</td>
<td>Martin Ntwaeaborwa</td>
<td>University of the Free State, South Africa</td>
<td>South Africa</td>
</tr>
<tr>
<td>Superconducting topological crystalline insulator Nanostructures candidate materials suitable for topological quantum computation</td>
<td>Satoshi Sasaki</td>
<td>University of Leeds</td>
<td>UK</td>
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<tr>
<td>The uniting of spectroscopy and diffractometry to the common benefit of nanoscience</td>
<td>Werner Lottermoser</td>
<td>Salzburg University</td>
<td>Austria</td>
</tr>
<tr>
<td>Examination of strong interaction between plasmon and molecular exciton by surface enhanced spectroscopy</td>
<td>Tamitake Itoh</td>
<td>National Institute of Advanced Industrial Science and Technology</td>
<td>Japan</td>
</tr>
<tr>
<td>Chitosan a potent nanoparticle for nutrient delivery into plant systems</td>
<td>Surya Anjani Kumar</td>
<td>Jawaharlal Nehru Technological University</td>
<td>India</td>
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**Young Research Forum**

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<thead>
<tr>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
<th>Country</th>
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<tbody>
<tr>
<td>Novel bottom-up sub-micron architectures for advanced functional materials</td>
<td>Chiara Busa</td>
<td>University of Birmingham</td>
<td>UK</td>
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<tr>
<td>Polymeric micelle embedded Chitosan nano particles as hydrophobic drug carrier</td>
<td>Esra Cihan</td>
<td>Izmir Institute of Technology</td>
<td>Turkey</td>
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<tr>
<td>Synthesis of silver nanoparticles using Tamarind kernel powder and Acacia Nilotica via a green route and its cytotoxicity study</td>
<td>Sabina Yeasmin</td>
<td>University of Calcutta</td>
<td>India</td>
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<tr>
<td>Wireless power for body devices</td>
<td>Mary Mehrnoosh Eshaghian-Wilner</td>
<td>University of Southern California</td>
<td>USA</td>
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</tbody>
</table>

**Poster Presentations**
**Title: Porous graphene aerogel supercapacitors**
Hyun Young Jung, Gyeongnam National University of Science and Technology, Korea

**Title: A new fluorescence/PET probe for intracellular human telomerase reverse transcriptase (hTERT) using Tat peptide-conjugated IgM antibody**
Kyung Oh Jung, Seoul National University College of Medicine, Korea

**Title: New approach to biomolecular self-assembly through formation of peptide architectures by artificial supersaturation**
Makoto Sakurai, National Institute for Materials Science, Japan

**Title: The molecular mechanism of antimicrobial properties of laser processed nano-particles**
Peri Korshed, The University of Manchester, UK

**Title: Nanocomposites of layered clays and graphene/graphene oxide for drug delivery**
Nada Hegazy, American University in Cairo, Egypt
Keynote Forum

Introduction
Title: Ligand-directed targeting and molecular imaging based on in vivo phage display: Nanotechnology applications
Renata Pasqualini, University of New Mexico, United States
Title: Design of a VLP-nanovehicle for CYP450 enzymatic activity deliverys
Rafael Vazquez-Duhalt, National Autonomous University of Mexico, Mexico
Title: Designing nanoparticle based immunodulators and vaccines: the intriguing link between inflammation and immune-suppression
Magdalena Plebanski, Monash University, Australia

Major Sessions:
Nanomedicine and Drug Delivery | Nanomedicine and Nanotheranostics | Nanomedicine and Nanobiotechnology
Session Chair: Renata Pasqualini, University of New Mexico, United States
Session Co-Chair: Chandrashekhar V Kulkarni, University of Central Lancashire, United Kingdom

Session Introduction
Title: Applications of Lipid Nanostructures and Hybrid Systems for Drug Delivery
Chandrashekhar V Kulkarni, University of Central Lancashire, United Kingdom
Title: Development of temperature-sensitive PEGylated nanostructured lipid carrier for co-delivery of gemcitabine and Baicalein against A549 cell line
Ming-Jun Tsai, China Medical University, Taiwan
Title: Superparamagnetic Iron Oxide Nanoparticles for Magnetic Hyperthermia Applications
Yogita Patil-Sen, University of Central Lancashire, United Kingdom

Group Photo
Title: Theranostic of atherosclerosis using human antibody-targeted multi-modal nanoparticles for in situ drug delivery
Gisèle Clofent-Sanchez, Bordeaux University, France
Title: In-vitro and in-silico studies on curcumin loaded chitin and chitosan nanoparticles from shrimp shells
Palanivel Rameshthangam, Alagappa University, India
Title: Multifunctional inorganic nanoparticles (Synthesis and biological applications)
Rakesh Kumar Sharma, University of Delhi, India
Title: Stimuli-responsive nanomaterial’s in cancer therapy
Chen-Sheng Yeh, National Cheng-Kung University, Taiwan

Young Researcher Forum
Title: Fabrication of silica-coated hollow carbon nanospheres encapsulating Fe₃O₄ cluster for magnetically and MR imaging guided NIR light triggering hyperthermia and enhanced US imaging
Yun-Kai Huang, National Cheng-Kung University, Taiwan
Title: The Quest to Achieving a Concerted Cancer Treatment: Challenges in Nanotheranostics Delivery
Yaw Opoku-Damoah, China Pharmaceutical University, China

Panel Discussion
### Desk Opens For Registrations

### Pailin 2

#### Keynote Forum

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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Smart and Living Implant Equipped with Active therapeutics and Stem cells for Regenerative Nano Medicine</td>
<td>Nadia Benkirane</td>
<td>INSERM, France</td>
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<tr>
<td>In-Vitro Depth-Dependent Photo thermal Ablation of Human Adenocarcinoma by Polystyrene Stabilized Fe₃O₄</td>
<td>Donglu Shi</td>
<td>University of Cincinnati, USA</td>
</tr>
<tr>
<td>Mesenchymal Stem Cells Behaviour in Nano fibrous Environment</td>
<td>George Altankov</td>
<td>Institute for Bioengineering of Catalonia, Spain</td>
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#### Major Sessions:

- Nanomedicine and Cancer
- Nanomedicine and Nanotoxicology
- Nanomedicine and Healthcare Applications
- Nanomedicine and Bioengineering

**Session Chair:** Nadia Benkirane, INSERM, France  
**Session Co-Chair:** Zhi Ping Xu, University of Queensland, Australia

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<tr>
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<tr>
<td>Cancer Treatment using Inorganic Nanoparticles</td>
<td>Zhi Ping Xu</td>
<td>University of Queensland, Australia</td>
</tr>
<tr>
<td>Toxic Evaluation of Graphene Quantum Dots with Hemorheological Measurements</td>
<td>Hun-Kuk Park</td>
<td>Kyung Hee University, Korea</td>
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<tr>
<td>Formulation of Nanocomposite drug containing fine ZnO Q-dots, and consideration of invitro cytotoxicity evaluation of mouth KB44, breast MCF7, colon HT29, and HeLa Cancer Cell Lines, and invivo mouse ear swelling tests</td>
<td>Zahra Fakhroueian</td>
<td>University of Tehran, Iran</td>
</tr>
<tr>
<td>Project Orchid – An Open Science-Open Source technology framework for sustainable global health innovation partnerships associated with infectious and chronic disease initiatives</td>
<td>Kimberly Harding</td>
<td>Monarch Innovation Partners, USA</td>
</tr>
<tr>
<td>Investigation of the uptake and cytotoxic mechanisms of amine-modified silver nanoparticles</td>
<td>Ying-Jan Wang</td>
<td>National Cheng Kung University, Taiwan</td>
</tr>
<tr>
<td>What should be concerned in nanomedicine for the developing countries</td>
<td>Viroj Wiwanitkit</td>
<td>Hainan Medical University, China</td>
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**Young Researcher Forum**

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<tr>
<td>Effect of BMP-2 peptide conjugated TiO₂ nanoparticle on osteogenic expression through biomimetic Zein PDA nanofibrous scaffold</td>
<td>Babitha Sekar</td>
<td>CSIR-Central Leather Research Institute, India</td>
</tr>
<tr>
<td>Targeted nanoparticles for multimodal molecular imaging in a mouse model of atherosclerosis</td>
<td>Melusine Lariviere</td>
<td>Bordeaux University, France</td>
</tr>
<tr>
<td>Thyroid hormone incorporated polycaprolactone nanofibrous material as a potential wound healing therapeutic</td>
<td>Ashwarya Satish</td>
<td>CSIR-Central Leather Research Institute, India</td>
</tr>
<tr>
<td>Molybdenum nanoplates incorporated polycaprolactone nanofibers: A potential threat to skin cancer</td>
<td>Janani Indrakumar</td>
<td>CSIR-Central Leather Research Institute, India</td>
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| Poster Presentations | Panel Discussion |

### Wednesday July 27, 2016 Day 3

#### Pailin 2

#### Major Sessions:

- Nanomedicine and Drug Delivery
- Nanomedicine
- Nanomedicine and Nanobiology

**Session Chair:** Viroj Wiwanitkit, Hainan Medical University, China
Title: Conjugates of DNA and Carbon nanotubes as nanobiosensors  
Kazuo Umemura, Tokyo University of Science, Japan

Title: Surface modification of layered double hydroxide nanoparticles with albumin to improve colloidal stability, redispersity and cellular uptake  
Zi Sophia Gu, The University of Queensland, Australia

Title: Attachment of fullerene C60 nanoparticles to a model cognition-enhancer improves its pharmacological profile  
Bachurin Sergey, Institute of Physiologically Active Compounds, Russia

Title: Enhanced cytotoxic effect of gold nanoparticles and Colocasia gigantea extract on A375 melanoma cell line  
Amornpun Sereemaspun, Chulalongkorn University, Thailand

Title: Venom conjugated polylactide applied as biocompatible material for passive and active immunotherapy against scorpion envenomation  
M. Elayeb, Pasteur Institute of Tunisia, Tunisia

Young Researcher Forum
Title: Synthesis of nanoparticle using dextran-like exopolysaccharide extracted from thermophilic bacteria and its biological activity  
Aparna Banerjee, The University of Burdwan, India

Closing and Vote of Thanks