22nd International Conference and Expo on
NANOSCIENCE AND MOLECULAR NANOTECHNOLOGY
November 06-08, 2017 | Frankfurt, Germany

Nanoscience 2017
**Day 1**  
**November 06, 2017**

**Meeting Room @ Schwarzwald**

<table>
<thead>
<tr>
<th>09:00-09:15</th>
<th>Registration</th>
</tr>
</thead>
</table>

### Conference Schedule

#### Keynote Forum

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30-10:10</td>
<td>Title: Small is Big: Bio-inspired and microfluidics-enabled structures for manipulating liquids</td>
<td>L Q “Rick” Wang, The University of Hong Kong, Hongkong</td>
<td>The University of Hong Kong, Hongkong</td>
</tr>
<tr>
<td>10:10-10:50</td>
<td>Title: Nanotechnology in liver cancer</td>
<td>Manfred George Kru kemeyer, Paracelsus-Hospitals, Germany</td>
<td>Paracelsus-Hospitals, Germany</td>
</tr>
</tbody>
</table>

#### Group Photo @ 10:50-10:55

#### Networking and Refreshments Break 10:55-11:10 @ Foyer

#### Sessions:
- Bio-Nanomaterials and Biomedical Devices, Applications
- Nanomaterials - Production, Synthesis and Processing
- Nanoelectronics and Nanometrology
- Nanotechnology & Energy
- Computation, Simulation & Modeling of Nanostructures, Nano Systems & Devices
- Nanomedicine & Nanobiotechnology, Nanoparticles

**Session Chair:** Liqiu “Rick” Wang, The University of Hong Kong, Hongkong

#### Session Introduction

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:10-11:50</td>
<td>Achieving dual phobic surfaces using nanostructured composite coatings</td>
<td>Sushanta K Mitra, Waterloo Institute for Nanotechnology, Canada</td>
<td>Waterloo Institute for Nanotechnology, Canada</td>
</tr>
<tr>
<td>11:50-12:30</td>
<td>Reactive force field simulation for design of energy-related materials</td>
<td>Sang Soo Han, Korea Institute of Science and Technology, South Korea</td>
<td>Korea Institute of Science and Technology, South Korea</td>
</tr>
</tbody>
</table>

#### Lunch Break 13:30-14:10 @ Restaurant Gaumenfreund

#### Young Researchers Forum

**Young Researchers Forum Judge:** Liqiu “Rick” Wang, The University of Hong Kong, Hongkong

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:30-16:50</td>
<td>Functionalization of mesoporous zirconia nanoparticles with bis-phosphonic acids for successful tailoring of the surface properties: In depth investigation of the process</td>
<td>Khohinur Hossain, Università Ca Foscari Venezia, Italy</td>
<td>Università Ca Foscari Venezia, Italy</td>
</tr>
</tbody>
</table>
Panel Discussion
Day 2 November 07, 2017
Meeting Room @ Schwarzwald

Keynote Forum

Title: Thin shell hollow mesoporous silica nanoparticles as adjuvants for improvement of anti-cancer immunity in vivo
Yajie Zhou, Huazhong University of Science and Technology (HUST), China

Title: Synthesis of thin shell hollow mesoporous silica nanoparticles through PEI-Etching strategy for vaccine adjuvants
Qianqian Liu, Huazhong University of Science and Technology (HUST), China

Title: Luminescent organic nanoparticles doped with europium β-Diketonate complexes
Olga Loginova, Moscow Region State University, Russia

Panel Discussion

Networking and Refreshments Break 10:50-11:10 @ Foyer

Title: Towards the implementation of cobalt nanocrystals in real systems
Katerina Soulantica, LPCNO-INS, France

Title: Novel 3D heterostructured catalysts for highly efficient oxygen reduction in solid oxide fuel cells
John Zhu, The University of Queensland, Australia

Sessions: Nanotechnology: Environmental effects and Industrial safety | Nanotechnology & Energy | Nanomedicine & Nanobiotechnology, Nanoparticles | Nanomaterials- production, synthesis and processing
Session Chair: Christophe A serra, University of Strasbourg, France

Session Introduction

Title: Removal of fluoride from water using composite of GO: Optimization of process variables through RSM
Syed Hadi Hasan, Indian Institute of Technology (BHU), India

Title: Iron based nanoparticles for the magnetically induced hydrogenation of carbon dioxide to methane
Alexis Bordet, RWTH University, Germany

Lunch Break 13:30-14:10 @ Restaurant Gaumenfreund

Title: Green synthesis of metal nanocatalysts for green catalysis
Riny Yolandha Parapat, Itenas Bandung-TU, Berlin

Title: Synthesis and characterization of two types of recyclable magnetic nano ferrite catalysts
Seham S Alterary, King Saud University, Saudi Arabia

Title: Nanogaguges for integration of strain sensors integrated into matter
Thomas Maurer, University of Technology of Troyes, France

Title: Cobalt hydroxide nanorings: From synthesis, characterization toward electrochemical energy storage
Masih Darbandi, University of Tabriz, Iran

Networking and Refreshments Break 16:10-16:30 @ Foyer

Poster Presentations : 16:30-17:00 @ Meeting rooms
Poster Judge: Christophe A serra, University of Strasbourg, France

Panel Discussion
### Day 3  November 08, 2017
Meeting Room @ Schwarzwald

#### Keynote Forum

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 09:30-10:10 | **Title:** Multifunctional magneto-Plasmonic nanostructures for nanotherapies and imaging  
Borja Sepulveda, ICN2, Spain |
| 10:10-10:50 | **Title:** Free-Standing nanostructures at atomic scale: From growth mechanisms to local properties at the nanoscale  
Jordi Arbiol, ICREA & Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC & BIST, Spain |
| 10:50-11:30 | **Title:** Localized Programmable Gas Phase Electrodeposition; A new Transport Process with Applications Ranging from the Deposition of Functional Nanostructures to the Collection and Identification of Airborne Species for Sensing Applications  
Heiko O Jacobs, Nanotechnology Group TU Ilmenau, Germany |

#### Networking and Refreshments Break 11:30-11:50 @ Foyer

#### Plenary Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 11:50-12:30 | **Title:** Effect of biocatalytic reactions on growth of semiconductor nanoparticles: Application to biosensing  
Valery Pavlov, CIC BiomaGUNE, Spain |


Session Chair: Borja Sepulveda, ICN2, Spain

#### Session Introduction

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 12:30-13:00 | **Title:** Photosensitization of zinc oxide: Novel visible-light-driven nanocomposites for photocatalytic removal of organic pollutants  
Aziz Habibi-Yangjeh, University of Mohaghegh Ardabili, Iran |
| 13:00-13:30 | **Title:** Piezophototronic Based Sensors and Applications  
Junyi Zhai, Chinese Academy of Science, China |

#### Lunch Break 13:30-14:10 @ Restaurant Gaumenfreund

#### Young Researchers Forum

Young Researchers Forum Judge: Borja Sepulveda, ICN2, Spain

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 14:10-14:30 | **Title:** Preparation of ultrasmall monodisperse upconversion nanocrystals and their size control using an intensified heat treatment process  
Alireza Kavand, Université de Strasbourg, CNRS, France |
| 14:30-14:50 | **Title:** Antibacterial surface modification of Ti based material for implants  
Jie Sun, Centre of Electrochemical Surface Technology GmbH (CEST), Austria |
| 14:50-15:10 | **Title:** Electroless deposition of Pt nanotube arrays: A template-based approach towards highly stable fuel cell catalysts  
Torsten Walbert, TU Darmstadt, Germany |
| 15:10-15:30 | **Title:** A smart cell carrier nanosystem made from thiolated polysaccharides  
Pegah Esmaeilzadeh, Martin Luther University Halle Wittenberg, Germany |
| 15:30-15:50 | **Title:** Electrochemical synthesis of ZnTe and Cu-ZnTe thin films for low resistive ohmic back contact for CdS/CdTe solar cells.  
Shivaji M Sonawane, Savitribai Phule Pune University, India |
| 15:50-16:10 | **Title:** Investigation of doping of CdSe QDs in organic semiconductor for solar cell application  
Ganesh R Bhand, Savitribai Phule Pune University, India |
| 16:10-16:30 | **Title:** Control of Mesoporous Silica Nanoparticles physicochemical properties through control of synthetic parameter using Box-Beihken design  
Mpho P Ngoepe, Rhodes University, South Africa |
**Plenary Session**

**Title:** Elucidating the role of Sn-substitution and Pb-(vac) in regulating stability and carrier concentration in CH3NH3Pb1-X-YSnX(vac)YI3  
**Saswata Bhattacharya,** Department of Physics, Indian Institute of Technology Delhi, New Delhi, India

**Panel Discussion**

**Award & Closing Ceremony**

**Poster Presentations:** 16:30-17:00 @ Meeting rooms @ Day-2, November 07

**Poster Judge:** Christophe A serra, University of Strasbourg, France

| NS-01 | **Title:** Electrohydraulical synthesis of magnetite nanoparticles for biological application  
Vladimer T Mikelashvili, Vladimir Chavchanidze Institute of Cybernetics of the Georgian Technical University, Georgia  
**Title:** Nano-Engineered titanium modulates macrophage polarization towards enhancing osteogenesis  
Ho-Jin Moon, Griffith University, Australia  
**Title:** Electrothermal control of upconversion emissions in rare-earth doped NaY(Gd)F4 nanoparticles by coupling with silver nanowires networks: A versatile platform for in situ thermal experiments  
Eduardo D Martínez, Instituto de Física Gleb Wataghin, Universidade Estadual de Campinas (UNICAMP), Brazil  
**Title:** Catalysis under cover: Enhanced reactivity at the interface between (doped) graphene and anataseTiO2  
Martina Datteo, Dipartimento di Scienza dei Materiali, Università di Milano-Bicocca, via Cozzi 55, 20125 Milano, Italy  
**Title:** Tailoring of band-gap and optical properties of ZnO nanoparticles by doping with Fe  
Thaiskang Jamatia, Tomas Bata University in Zlin, Czech Republic  
**Title:** Preparation and characterization of MWNT-grafting-polyisoprene nanocomposites via ARGETATRP process  
Hyunseung Lee, Inje University, South Korea  
**Title:** Bacterial nanocellulose hemocompatibility assesment: Effect of drying and biomaterial microporosities on blood response  
Estefanía Martinez C, Universidad Pontificia Bolivariana, Colombia  
**Title:** Synthesizing spherical silver nanoparticles of uniform size using azadirachta indica leaf extract  
Ashu Jain, IIT Delhi, India  
**Title:** Investigation of 12-tungestophosphoric acid immobilized on zirconium modified SBA as catalyst for esterification of glycerol  
Ali Reza Mahjoub, Tarbiat Modares University, Iran  
**Title:** Structural and molecular characterization of biochemical interactions thorough microscopic examinations  
Maryam Kamalipourazad, Tarbiat Modares University, Tehran, Iran

**Award & Closing Ceremony**