

# World Congress on Recent Advances in Nanotechnology (RAN'16)

The congress consists of:

International Conference on Nanomaterials, Nanodevices, Fabrication and Characterization (ICNNFC'16)

International Conference on Nanobiotechnology (ICNB'16)

International Conference on Nanotechnology Modeling and Simulation (ICNMS'16)

International Conference on Nanomedicine, Drug Delivery, and Tissue Engineering (NDDTE'16)

International Conference on Nanotechnology and Environmental Issues (ICNEI'16)

*Registrants from the five conferences are permitted to attend any sessions from any of the five conferences. All the sessions of the conference will be held in Room Aquarius.*

## Friday April 1

8:00 AM	Registration	Session Chair: Dr. Josef Jampilek
9:00 AM – 9:15 AM	Official Opening of Congress	
9:15 AM – 10:00 AM	<b>ICNNFC Keynote Lecture I:</b> <i>Multiscale Hierarchical Micro- and Nanostructures: Nanotubes and Micro-Assembly</i> <b>Dmitry Bavykin</b> <b>University of Southampton, UK</b>	
10:00 AM – 10:45 AM	<b>ICNB Keynote Lecture:</b> <i>Biosensing with AFM</i> <b>Petr Skládal</b> <b>Masaryk University, Czech Republic</b>	
10:45 AM – 11:05 AM	<b>Coffee Break</b>	

**11:05 AM – 12:25 PM**

Friday

**Session Name:**  
Nanomaterials & Nanodevices I**Session Chair:**  
**Dr. Josef Jampilek &  
Dr. Wolfgang Ensinger**

11:05 AM – 11:15 AM

ICNNFC 115: *Nickel Oxide Nanoparticles Synthesized Under Microwave Irradiation*  
Armando Rodríguez, Boris Kharisov, **Alejandro Vázquez**  
**Universidad Autónoma de Nuevo León, Mexico**

11:15 AM – 11:25 AM

ICNNFC 116: *Exciton-Plasmon Interactions between CdS Quantum Dots and Noble Metal Nanospheres in Aqueous Dispersion*  
**Israel López**, Manuel Ceballos, Idalia Gómez  
**Universidad Autónoma de Nuevo León, Mexico**

11:25 AM – 11:35 AM

ICNNFC 110: *2<sup>nd</sup> Generation Layered Silicates Nanocomposites with improved Mechanical and Electrical Properties*  
**Volker Altstädt**, Josef Breu  
**University of Bayreuth, Germany**

11:35 AM – 11:45 AM

ICNNFC 122: *Single Cell Mass Measurement with Microcantilever Biosensor*  
**Bogdan Łabędź**, Aleksandra Wańczyk, Zenon Rajfur  
**Jagiellonian University, Poland**

11:45 AM – 11:55 AM

ICNNFC 119: *Enabling High Aspect Ratio Nano-hole Metal Filling by Employing Supercritical Carbon Dioxide Electrochemical Deposition*  
**Wen-Ta Tsai**, Jun-Jie Yang, Chi-Lin Cheng  
**National Cheng Kung University, Taiwan**

11:55 AM – 12:15 PM

ICNNFC 121: *Structure Study of Mn Doped in SrTiO<sub>3</sub> by X-ray Diffraction*  
**Z. I. Y. Booq** and S. K. Alghaith  
**King Saud University, Saudi Arabia**

12:15 PM – 12:25 PM	ICNMS 104: <i>DNA Nanostructure Modelling and Simulation</i> <b>Moon Ki Kim</b> Sungkyunkwan University, South Korea	<b>Friday</b>
<b>Group Photo of the Congress will be happening from 12:25 PM – 12:30 PM.          Please come to the registration desk to take the photo.</b>		
12:30 PM – 1:30 PM	<b>Lunch</b>	
1:30 PM – 2:15 PM	<b>ICNMS Keynote Lecture:</b> <i>Multiscale Modelling of Graphene from Nano to Micron Scales</i> <b>Tapio Ala-Nissilä</b> Aalto University, Finland	<b>Session Chair: Dr. Dmitry Bavykin</b>
2:15 PM – 3:00 PM	<b>NDDTE Keynote Lecture I:</b> <i>Can Locally Administered Nanoparticles Revolutionize the Treatment of the Oral Cavity?</i> <b>Marianne Hiorth</b> University of Oslo, Norway	
<b>3:00 PM – 4:00 PM</b>		
<b>Session Name:</b> Computational Nanotechnology		<b>Session Chairs:</b> <b>Dr. Alejandro Vazquez</b>
3:00 PM – 3:20 PM	ICNMS 105: <i>QED Heat Transfer</i> <b>Thomas Prevenslik</b> QED Radiations, China	
3:20 PM – 3:30 PM	ICNNFC 109: <i>Green Synthesis of Silver Nanoparticles by Statistical Experimental Design</i> <b>Ayşen Aktürk</b> , Melek Erol Taygun, Gültekin Göller, Sadriye Küçükbayrak Istanbul Technical University, Turkey	

3:30 PM – 3:40 PM	<p>ICNNFC 114: <i>Proteomic Study of the Outer Layer of Biogenic Selenium Nanoparticles</i>  <b>Alessandra Bulgarini</b>, Daniela Cecconi, Silvia Lampis, Giovanni Vallini  <b>University of Verona, Italy</b></p>
3:40 PM – 4:00 PM	<p>ICNNFC 113: <i>Effects of Synthesis Parameters on the Characteristics of Naa Type Zeolite Nanoparticles</i>  <b>Mojtaba Mirfendereski</b>, Toraj Mohammadi  <b>Shahid Beheshti University, Iran</b></p>
4:00 PM – 4:15 PM	<b>Coffee Break</b>
<b>4:15 PM – 5:05 PM</b>	
<p><b>Session Name:</b>  Nanotechnology.. Gene &amp; Drug Delivery I</p>	<p><b>Session Chairs:</b>  <b>Dr. Josef Jampilek &amp;</b>  <b>Dr. Ruiying Li</b></p>
4:15 PM – 4:25 PM	<p>ICNB 102: <i>Fluorescent Nanodiamonds Enable Tracking of Prospectively Isolated Lung Stem Cells in Vivo</i>  <b>John Yu</b>  <b>Stem Cells and Translational Cancer Research Centre, Taiwan</b></p>
4:25 PM – 4:35 PM	<p>ICNB 103: <i>Novel Analysis of Glycan Structures: Nanoscale Approach</i>  <b>Tomas Bertok</b>, Dominika Pihikova, Alena Holazova, Andras Hushegyi, Ludmila Klukova, Jaroslav Filip, Stefan Belicky, Erika Dosekova, Peter Kasak, Jan Tkac  <b>Slovak Academy of Sciences, Slovakia</b></p>
4:35 PM – 4:45 PM	<p>NDDTE 106: <i>Pioglitazone Loaded-PLGA-PEG Nanoparticles: Drug Release and Interactions</i>  <b>Marcelle Silva de Abreu</b>, Maria Antonia Egea, Ana Cristina Calpena, Marta Espina, Maria Luisa García  <b>University of Barcelona, Spain</b></p>
4:45 PM – 4:55 PM	<p>NDDTE 104: <i>Fabrication and Characterization Of Copper Doped Polymer/Bioactive Glass Composite Scaffolds</i>  <b>Nuray Yerli</b>, Melek Erol Taygun, Yakup Yürektürk, Sadriye Küçükbayrak  <b>Istanbul Technical University, Turkey</b></p>

4:55 PM – 5:05 PM

NDDTE 105: *Nanogel-Mediated Protein Replacement Therapy for Autosomal Recessive Congenital Ichthyosis (ARCI)*

**Roswitha Plank**, Katja Obst, Guy Yealland, Marcelo Calderón, Sarah Hedtrich, Katja Martina Eck, Hans Christian Hennies

**Innsbruck Medical University, Austria**

# Saturday

## April 2

9:00 AM – 9:45 AM	<b>ICNNFC Keynote Lecture II:</b> <i>Nanostructured Materials for Electrochemical Applications</i> <b>Dina Fattakhova-Rohlfing</b> <b>Ludwig-Maximilians-University Munchen, Germany</b>	<b>Session Chairs:</b> <b>Dr. Marianne Hiorth</b>
9:45 AM – 10:30 AM	<b>NDDTE Keynote Lecture II:</b> <i>Nanoformulations of Antimicrobial Chemotherapeutics</i> <b>Josef Jampilek</b> <b>University of Veterinary and Pharmaceutical Sciences Brno, Czech Republic</b>	
10:30 AM – 10:50 AM	<b>Coffee Break</b>	
10:50 AM – 11:35 AM	<b>ICNEI Keynote Lecture:</b> <i>Graphene and Its Derivates, Applications And Environmental Issues</i> <b>Zdenek Sofer</b> <b>University of Chemistry and Technology Prague, Czech Republic</b>	
<b>11:35 AM – 12:25 PM</b>		
<b>Session Name:</b> Nanotechnology.. Gene & Drug Delivery II		<b>Session Chair:</b> <b>Dr. Marianne Hiorth</b>
11:35 AM – 11:55 AM	NDDTE 107: <i>Gene Therapy for Bone Regeneration using Non-viral BMP Gene Expression Vector and in vivo Electroporation</i> <b>Mariko Kawai, Kiyoshi Ohura</b> <b>Osaka Dental University, Japan</b>	
11:55 AM – 12:05 PM	NDDTE 111: <i>Increase Alginate-Chitosan Nanoparticles Transport Efficiency Through the Epithelium by Attaching nt-PE onto Surface</i> <b>Ruiying Li, Paul De Bank, Randy Mrsny</b> <b>University of Bath, UK</b>	

12:05 PM – 12:15 PM	NDDTE 113: <i>In Vivo Assessment of Metal Organic Framework (MOFs) for the Future use as Delivery Agents for Drugs to Treat PAH</i> <b>Nura A Mohamed</b> , Rob Davies, Paul D. Lickiss, Gemma Freeman, Daniel Morales-Cano, Bianca Barreira, Nicholas S. Kirkby, Laura Moreno and Jane A Mitchel <b>Imperial College of London, UK</b>
12:15 PM – 12:25 PM	NDDTE 122: <i>Droplet-born Air Blowing(DAB) Technology for the Industrialization of Dissolving Microneedle</i> <b>Jung Dong Kim</b> , Jung-hyun Bae, Hong Kee Kim, Do Hyeon Jeong <b>Raphas Co., Ltd., South Korea</b>
12:25 PM – 1:25 PM	<b>Lunch</b>
<b>1:25 PM – 1:55 PM</b>	<b>Poster Session (View Page 8)</b>
1:25 PM – 1:40 PM	<b>Coffee Break</b>
<b>1:55 PM – 3:45 PM</b>	
<b>Session Name:</b> Nanomaterials & Nanodevices II	<b>Session Chairs:</b> <b>Dr. Zdenek Sofer &amp;</b> <b>Dr. Zainab Booq</b>
1:55 PM – 2:05 PM	ICNNFC 123: <i>The Synthesis and Characterization of Magnetic Chitosan-poly(N,N-diethylacrylamide) Semi-IPN Films</i> Burcu Aydođdu, Ali Alipour, <b>Gülten Gürdađ</b> <b>Istanbul University, Turkey</b>
2:05 PM – 2:15 PM	ICNNFC 129: <i>Role of the Substrate Surface Morphology and Physicochemical Properties for Molecular Transport in the Vicinal Water: Aspect of Continuity of Dynamic Hydrogen Bond Network</i> <b>Justyna Nowak</b> , Józef K. Mościcki <b>Jagiellonian University, Poland</b>
2:15 PM – 2:35 PM	ICNNFC 126:  <b>INAPO</b> - <i>Ion Conducting Nanopores in Polymer Foils Chemically Modified for Biomolecular Sensing</i> <b>Wolfgang Ensinger</b> , Gerhard Thiel, Ivana Duznovic, Saima Nasir, Mubarak Ali <b>Technische Universität Darmstadt, Germany</b>

2:35 PM – 2:55 PM	<p>ICNNFC 132: <i>A Facile and Effective Method for Size Sorting of Large Flake Graphene Oxide</i>  Ece Özçakır, <b>Volkan Eskizeybek</b>  <b>Çanakkale Onsekiz Mart University, Turkey</b></p>
2:55 PM – 3:05 PM	<p>ICNEI 102: <i>Dynamics of Agglomeration of Magnetite Nanoparticles under Magnetic Field Studied by Monitoring Magnetic Weight</i>  Daeseong Jin and <b>Hackjin Kim</b>  <b>Chungnam National University, South Korea</b></p>
3:05 PM – 3:15 PM	<p>ICNEI 103: <i>Characterization of HOPG, Sputtered HPOG and Graphene by ToF-SIMS and XPS</i>  <b>Chi-Ming Chan</b>, Wenjing Xie, Lu-Tao Weng, Kai Mo Ng, Chak K. Chan  <b>Hong Kong University of Science and Technology, Hong Kong</b></p>
3:15 PM – 3:25 PM	<p>ICNEI 106: <i>Education of Nanoscience: Introduction to the Preparation, Characterization, and Application of Gold Nanoparticles</i>  <b>Yang-Wei Lin</b>  <b>National Changhua University of Education, Taiwan</b></p>
3:25 PM – 3:45 PM	<p>ICNEI 105: <i>Improvement in Hydrogen Sensing Response of Zinc Oxide Doped with Platinum</i>  Anita Hastir, <b>Nipin Kohli</b>, Ravi Chand Singh  <b>BBK DAV College for Women, India</b></p>
8:00 PM – 10:00 PM	<b>Cruise Tour</b>



# Poster Session

April 2

1:25 PM – 1:55 PM

ICNNFC 102: *Revealing the Nature of Nano-filaments in Memristive Oxide Memories*

Xiaolei Wang, Qi Shao, **Antonio Ruotolo**

**City University of Hong Kong, Hong Kong**

ICNNFC 108: *Characterization of Soluble Fluorinated Dielectric Nanomaterials for Printed Thin Film Transistors*

Kwang Ho Kim, Young Tae Kim, Jin-Kyun Lee, **Byungwook Yoo**

**Korea Electronics Research Institute, South Korea**

ICNNFC 111: *Longevity Tests of Rh/Al-Ce-Zr Catalyst for Auto-thermal Reforming of Diesel Oil*

Won Young Choi, Yeon Baek Seong, Tae Hoon Lee, Chang Jun Park, Jin Wook Lee, Min Jung Kim, **No-Kuk Park**, Tae Jin Lee

**Yeungnam University, South Korea**

ICNNFC 112: *Preparation of Macro-porous Si as a Anode Material for Li-ion Battery*

Min Jung Kim, Yeon Baek Seong, Tae Hoon Lee, **Chang Jun Park**, Jin Wook Lee, Won Young Choi, No-Kuk Park, Tae Jin Lee

**Yeungnam University, South Korea**

ICNNFC 118: *Silver Nanowire-based Transparent Electrode as Flexible Anode for Large-Area Organic Light-Emitting Diodes*

Minha Kim, Eun Jung, **Sung Min Cho**

**Sungkyunkwan University, South Korea**

ICNNFC 120: *From Hydrophobic to Superhydrophilic Electrospun Surfaces*

Carolina Fracalossi Redigueri, Natalia Neto Pereira Cerize, Maria Helena Ambrosio Zanin, Adriano Marim de Oliveira, **Terezinha de Jesus Andreoli Pinto**

**Farmacêuticas da Universidade de São Paulo, Brazil**

ICNNFC 124: *Fabrication of Gapless Moth's Eye Microlens Array using Selective Aluminium Anodizing based on Concentrated Electric Field*

Yong Min Park, **Byeong Hee Kim**, Young Ho Seo

**Kangwon National University, South Korea**

ICNNFC 125: *Determination of Single Cell Growth Kinetics with Microcantilever Sensors*

**Aleksandra Wańczyk**, Bogdan Łabędź, and Zenon Rajfur

**Jagiellonian University, Poland**

NDDTE 103: *Development of an Alendronate Controlled Delivery System for Bone Repair Applications*

Andreea-Gabriela Deca, **Ionela Belu**, Octavian Croitoru, Johny Neamțu

**University of Medicine and Pharmacy of Craiova, Romania**

NDDTE 112: *Polysaccharide-Based Hydrogels for Tissue Engineering*

Jae-Won Lee, Hyo-Seok An, **Kuen Yong Lee**

**Hanyang University, South Korea**

NDDTE 114: *PEGylated Curcumin with Gold Nanoparticles: Antimicrobial Agent Evaluation*

Courrol Daniella dos Santos, Teixeira Bruna Henrique, Pereira Camila Bueno Pacheco, Franzolin

Marcia Regina, **Courrol Lilia Coronato**

**Universidade Federal de São Paulo, Brazil**

NDDTE 115: *Synthesis and Characterization of Curcumin Gold Nanoparticles: Sonosensitizer Agent for Atherosclerosis*

Teixeira Bruna Henrique, Chaves Alisson Alencar, Batista Wagner Luis, **Courrol Lilia Coronato**

**Universidade Federal de São Paulo, Brazil**

NDDTE 126: *Controlled Release of Doxorubicin from Electrospun Gelatin Nanofibers*

**Derya Mete**, Nesrin Horzum, Gülşah Şanlı Mohamed

**İzmir Institute of Technology, Turkey**