

8<sup>th</sup> European Congress on

# Advanced Nanotechnology and Nanomaterials

Day 1 October 12, 2023

Meeting Hall: **Event 4&5**

08:00 - 8.45 Registration

8.45 - 9.00 Introduction

## Keynote Presentations

9.00 - 9.40 Harmonic and Anharmonic Lattice Thermal Capacities of Molecular Wires and 0001-oriented Cylindrical ZnO Nano-Wires

**Valeri Ligatchev**, Independent Researcher, Singapore

9.40 - 10.20 Effect of Magnetocrystalline Anisotropy to Enhance Self Heating Efficiency of Rare Earth Substitute Fe<sub>3</sub>O<sub>4</sub> Nanoparticles for Magnetic Hyperthermia Application

**Jyoti Prasad Borah**, NIT Nagaland, India

## Exhibitor Presentation

10:20 - 10:50 Introduction (Exhibitor)  
**Juliusz Skoryna**, De Gruyter, Poland

Group Photo 10:50 - 11.00

Networks & Refreshments 11.00 - 11.15 @ Foyer

## Oral Presentations

Chair **Masahiko Hara**, Tokyo Institute of Technology, Japan

Co-Chair **Alexandre D'Agostini Zottis**, Federal Institute of Santa Catarina, Brazil

Sessions  
Advanced Materials and Applications | Life Sciences & Nanomedicine | Nanotech: In other fields | Nanotech for Energy and Environment | Nanotechnology and Nanomaterials | Biomedical Engineering and Nanobiotechnology | Nanocharacterization and Nanomanufacturing |

11.15 - 11.45 Characterisation of Vertical VO<sub>2</sub> Nano Switch  
**János Mizsei**, Budapest University of Technology and Economics, Hungary

11.45 - 12.15 The Influence of Gelatin type and Processing Conditions on Gelatin Nanoparticle Properties  
**Jos Olijve**, Rousselot BV, Netherlands

12.15 - 12.45 Mobilizing Phospholipids on Tumor Plasma Membrane via Nano-Particle Mediated Delivery Implicates Phosphatidylserine Externalization Blockade for Cancer Immunotherapy  
**Yi-Nan Gong**, Hillman Cancer Center, USA

12.45 - 13.15 Development and Evaluation of A High-flow-rate Cascade Impactor Equipped with Gelatin Filters for Collecting Ambient Particulate Matter  
**Constantinos Sioutas**, University of Southern California, USA

Lunch 13:15 - 14:00 @ Gallery

14:00 - 14.30 Innovative Nanomaterials for The Removal of Nucleic Acids of Bacteria Conveying Antibiotic Resistance Genes from Water/Wastewater  
**Mike O. Ojemaye**, University of Fort Hare, South Africa

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14.30 - 15.00	Ferritin Nanocage and Gold Nanorod Bioconjugate for Cancer Photothermal Therapy <b>Janhavi Devrukhkar</b> , Indian Institute of Technology Bombay, India
15.00 - 15.30	Use of Nanomedicine in the Treatment of Atherosclerosis <b>Ahsan Ali</b> , Kazakh Russian Medical University, Kazakhstan
15.30 - 16.00	A Mixed-Finite Element Method Based Formulation for the Static Bending Analysis of Eringen's Strain-Driven Euler-Bernoulli Nanobeams <b>Gaurab Kumar Khanra</b> , Indian Institute of Space Science and Technology, India
Networks & Refreshment 16:00 - 16:30 @ Foyer	
16.30 - 17.00	A Rapid Method for the Middle Uremic Toxin $\beta_2m$ Analysis via SMPS <b>Alice Chinghsuan Chang</b> , Industrial Technology Research Institute, Taiwan
17.00 - 17.30	Preclinical Evaluation of Novel Oxasmaragdyrin Dye Loaded Liposomes as NIR Triggered Theranostic Agent for Cancer Photothermal Therapy <b>Suditi Neekhra</b> , Indian Institute of Technology, India
17.30 - 18.00	Continuous Preparation of Size-Controlled $NiFe_2O_4$ Nanoparticles by Means of A Spinning Disk Reactor <b>Lorenzo Iezzi</b> , Sapienza University of Rome, Italy
Day 1 Concludes followed by Awards Ceremony	

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# Advanced Nanotechnology and Nanomaterials

Day 2 October 13, 2023

Meeting Hall: **Event 4&5**

## Keynote Presentations

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|--------------|---|
| 9:00 - 9:40  | Bridging The Gap Between Emerging Technologies and AI Hardware!<br><b>Shady Agwa</b> , The University of Edinburgh, United Kingdom  |
| 9:40 - 10:20 | Hedgehog Architectures of Hydrocarbon Surfactants to Form a Low Surface Energy Monolayer Comparable to Fluorocarbons<br><b>Masanobu Sagisaka</b> , Hirosaki University, Japan |

## Oral Presentations

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|----------|--|
| Chair    | <b>Masahiko Hara</b> , Tokyo Institute of Technology, Japan                    |
| Co-Chair | <b>János Mizsei</b> , Budapest University of Technology and Economics, Hungary |

Sessions  
Nanomaterials and Nanoparticles | Computational Nanotechnology | Nanotechnology and Nanomaterials | Nanostructures And Nano films | Nanotech for Energy and Environment | Recent Development and Advanced Researches in Nanotechnology | Nanophotonics and Nano/Micro optics | Material Science and Nanomaterials | Nanomaterials and Nanoparticles | Industrial Nanotechnology

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|---------------|---|
| 10:20 - 10:50 | Novel Superparamagnetic Iron Oxide Nanoparticles Coated by Pheomelanin and Unsaturated Copolymer Applied to Biomedical Applications for Breast Cancer<br><b>Alexandre D'Agostini Zottis</b> , Federal Institute of Santa Catarina, Brazil |
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## Networks & Refreshments 10:50 - 11:05 @ Foyer

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|---------------|---|
| 11:05 - 11:35 | Nano-Spectroscopic Approaches to Chemical Evolution and Origin of Life<br><b>Masahiko Hara</b> , Tokyo Institute of Technology, Japan   |
| 11:35 - 12:05 | Crystallization of Nanostructured Explosive Mixtures into Core-Shell using Spray Flash Evaporation (SFE) and Mechanistic Study for Nanodiamonds Synthesis<br><b>Maxence VINCE</b> , French-German Research Institute of Saint-Louis, France |
| 12:05 - 12:35 | Aptamer Target Chain Reaction (ATCR) for Smart Therapeutic Inhibitor Development<br><b>Hung-Wing Li</b> , The Chinese University of Hong Kong, Hong Kong  |
| 12:35 - 13:05 | Nano-Reinforced Heating Element for De-icing Applications<br><b>Konstantina Zafeiropoulou</b> , University of Patras, Greece  |

## Lunch 13:05 - 14:05 @ Gallery

## Poster Presentations

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|--------------|--|
| Poster Judge | <b>Valeri Ligatchev</b> , Independent Researcher, Singapore  |
| PP-01        | Encapsulation and Delivery of a Five-Step Biosynthesis Pathway in a Porous Metal-Organic Framework<br><b>Ainur Sharip</b> , King Abdullah University of Science and Technology, Saudi Arabia                         |
| PP-02        | The Characterization of Hydrogel Contact Lens with Pyridine Group Materials<br><b>A-Young Sung</b> , Seon-Young Park and Hye-In Park, Daegu Catholic University, South Korea   |
| PP-03        | Stabilization of Water/Supercritical CO <sub>2</sub> Nanodispersions with Highly-Methylated Nonionic Amphiphiles and its Utilization for Nanoparticle Synthesis<br><b>Hiroto Iizuka</b> , Hirosaki University, Japan |

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PP-04	<p>The Design of a Self-Discharging Filter: Nanotechnology Know-How in the Marine Industry</p> <p><b>Nataliia Tiron-Vorobiova</b>, Danube Institute of National University, Ukraine</p>
PP-05	<p>Accelerated Adsorption and Surface Tension Reduction of Surfactant in Water by Heterogeneous Hydrophobic Chains Having Tms and T-Butyl Groups</p> <p><b>Hinata Komiyama</b>, Hirosaki University, Japan</p>
PP-06	<p>Position-dependent Optical Absorption of A Hydrogenic-like System in Mesoscopic Coupled Quantum Dot-ring: Electric Field Effects</p> <p><b>Nicolás Hernández</b>, Universidad Nacional de Colombia Sede Medellín, Colombia</p>
PP-07	<p>Optical Absorption Calculation of A D<sub>0</sub> System Confined in Semiconductor Quantum Camels</p> <p><b>Ricardo Lopez-Doria</b>, Universidad Nacional de Colombia Sede Medellín, Colombia</p>
PP-08	<p>EGFR Targeted Cabazitaxel Loaded Lipid-based Nanocarrier: A New Intervention for The Management of The Breast Cancer</p> <p><b>Charu Misra</b>, University of Bradford, United Kingdom</p>
PP-09	<p>Plasmonic Metasurfaces Fabricated by Nano-Imprinting Lithography and Their Optical Applications</p> <p><b>Yung-Chun Lee</b>, National Cheng Kung University, Taiwan</p>
PP-10	<p>Designing and Characterization of Antibody and Fab Fragment Conjugated Niosomal Nanoparticles</p> <p><b>Nilufer Cakir</b>, Sabanci University, Turkey</p>

### Video Presentation

VP-01	<p>Characterization of the Diameter of Aerodynamic Droplets Generated In Nebulizers Using the Image Processing Technique</p> <p><b>Luciana Martins Pereira de Araújo</b>, Jorge Amado University, Brasil</p>
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### Day 2 Concludes

Panel Discussion - Awards & Closing Ceremony followed by Vote of Thanks

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## Virtual Presentations

Day 1 October 12, 2023

11:00 - 11:10 Introduction

### Oral Presentations

- 11:10 - 11:40 Solid-State Hydrogen Storage Materials Based on Nanostructured Magnesium: Synthesis and Properties  
**Matoke Peter Mose**, National Taiwan University of Science and Technology, Taiwan
- 11:40 - 12:10 Synthesis and Characterization of Non-Toxic Organo- Modified Layered Double Hydroxide and Clay Nanoplatelet-Polyethyleneterephthalate Nanocomposites  
**Naveen Bunekar**, Chung Yuan Christian University, Taiwan

### Keynote Presentation

- 12:10 - 12:50 Shape Memory Effect and Thermomechanical Reactions in Shape Memory Alloys  
**Osman Adiguzel**, Firat University, Turkey

### Oral Presentations

- 12:50 - 13:20 Novel Green Synthesis of Propolis Pollen Nano-Emulsion and Evaluation of its Physicochemical Properties and Cytotoxicity  
**Dalia MA Elmasry**, Agricultural Research Center, Egypt

### Lunch(13:20 - 13:50)

- 13:50 - 14:20 Enhanced Anti-Inflammatory and Ulcerogenicity of Ibuprofen Microsphere Formulations using Irvingia Wombolu Fat (IRW) and Moringa Oil (MO) as Co-Lipids  
**Thaddeus Harrison Gugu**, University of Nigeria, Nigeria
- 14:20 - 14:50 Multifunctional Hydrogel-based Electrolytes for Thermoelectrochromic Devices  
**Valeria De Matteis**, University of Salento, Italy
- 14:50 - 15:20 Engineering Microporous Organic Nanospheres as A Drug Carrier  
**Shumaila Razzaque**, Institute of Physical Chemistry, Poland
- 15:20 - 15:50 Self-Assembled Organic Optical Waveguides  
**Amir Handelman**, Holon Institute of Technology, Israel
- 15:50 - 16:20 Simulation of Lead-Free Perovskite MAGel3 Solar Cell  
**Hasina Huq**, The University of Texas Rio Grande Valley, USA

Day 1 Concludes



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## Day - 2 October 13, 2023 BST

### Oral Presentations

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|---------------|--|
| 11:00 - 11:30 | Preparation and High-performance Electronic Devices of Black Phosphorus Nanoribbons<br><b>Changxin Chen</b> , Shanghai Jiao Tong University, China   |
| 11:30 - 12:00 | Significant Impact of Green Synthesized Nanoparticles in Low-cost Electricity Generation and Antibacterial Applications<br><b>Bithi Paul</b> , American International University, Bangladesh |
| 12:00 - 12:30 | Magnetically Separable Nanocomposite Beads for Radionuclides Adsorption from Aqueous Solution<br><b>Manish Sharma</b> , Malaviya National Institute of Technology, India                     |
| 12:30 - 13:00 | Influence of Biofiber Reinforcement Materials on the Mechanical strength of the Hybrid Composite Materials<br><b>VV Venu Madhav</b> , V.R. Siddhartha Engineering College, India             |
| 13:00 - 13:30 | Nano-Materials Challenges; for Industrial Applications<br><b>IK Battisha</b> , National Research Centre, Egypt   |
| 13:30 - 14:00 | Dielectric Behaviour of Blended Mineral Oil with Vegetable Ester Containing TiO <sub>2</sub> Nanoparticles<br><b>Prabhat Kumar Maiti</b> , Regional Testing Laboratory, India                |

### Poster Presentations

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|---------------|---|
| 14:00 - 14:15 | Green Synthesis and Characterization of ZnO Nanoparticles by using Bryophyllum Pinnatum Leave Extract and Its Antibacterial Application<br><b>Monika Paul</b> , National University, Bangladesh |
| 14:15 - 14:30 | TXTL System for Fast Decode Synthetic Spidroins<br><b>Valquíria A. Michalczechen Lacerda</b> , Embrapa, Brazil  |
| 14:30 - 14:45 | The Design of a Self-Discharging Filter: Nanotechnology Know-How in the Marine Industry<br><b>Nataliia Tiron-Vorobiova</b> , Danube Institute of National University, Ukraine                   |

Day 2 Concludes