



# NANOMEET2022

AUGUST 15-17, 2022 | EDINBURGH, SCOTLAND

**Location:** Leonardo Edinburgh Murrayfield 187  
Clermiston Rd, Edinburgh EH12 6UG, United Kingdom

**Final Program**



## ALBEDO MEETINGS

Floor# 3, Advant Building, 99B, Kakatiya  
Hills, Kavuri Hills, Madhapur Hyderabad,  
TS 500033

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## DAY 1 | AUGUST 15, 2022

09:00-09:15	On Spot Registrations	
09:15-09:30	Opening Ceremony	
<b>Plenary Session</b>		
<b>Conference Chair: Prof. Thomas Webster, Interstellar Therapeutics, USA</b>		
09:30-10:10	<b>Title: Alpha, Beta, Gamma, Delta, Omicron, What's Next? Nanomedicine for COVID-19, Tissue Engineering, and So Much More</b> Thomas Webster, Interstellar Therapeutics, USA	P
10:10-10:50	<b>Title: Biosourced Materials for Energy Transition</b> Vanessa Fierro, University of Lorraine, France	P
10:50-11:30	<b>Title: Nanomaterials for Energy Storage and Photocatalysis</b> Jae-Jin Shim, Yeungnam University, South Korea	P
11:30-11:50	<b>Coffee Break</b>	
<b>Keynote Session</b>		
11:50-12:20	<b>Title: Electronic Structure and Catalytic Activity of 2D Materials</b> Hong Seok Kang, Jeonju University, South Korea	K
12:20-12:50	<b>Title: MoTe<sub>2</sub> Field Effect Transistor for High-Temperature Operation</b> Harri Lipsanen, Aalto University, Finland	K
12:50-13:00	<b>Group Photo</b>	
13:00-13:40	<b>Lunch Break</b>	
<b>Invited Session</b>		
Session-01	<b>Nanomaterials</b> <b>Session Chair: J.F. Pierson, University of Lorraine, France</b>	
13:40-14:05	<b>Title: Efficient Thermochromic VO<sub>2</sub> Thin Films Formed after a Two-step Process</b> J.F. Pierson, University of Lorraine, France	I
14:05-14:30	<b>Title: Modification of Montmorillonite as a Reinforcing Filler for Nanocomposites with Various Polymeric Matrices</b> Ivan Chodak, Polymer Institute SAS, Slovakia	I
14:30-14:55	<b>Title: Size-Selected Clusters: From Heterogenous Catalysis to Electrocatalysis and Li-O<sub>2</sub> Batteries</b> Stefan Vajda, Czech Academy of Sciences, Czech Republic	I
14:55-15:20	<b>Title: Tunable CNT Surfaces for THz Wave Applications</b> Dmitri V. Lioubtchenko, Institute of High Pressure Physics & KTH Royal Institute of Technology, Poland/Sweden	I
15:20-15:45	<b>Title: Investigation of ZnO Thin Films Doped by Rare-Earth Metals</b> Alex Axelevitch, Holon Institute of Technology, Israel	I
15:45-16:05	<b>Coffee Break</b>	
16:05-16:30	<b>Title: Molecular Switches Acting in Tandem with Nano Cages</b> Yael Diskin-Posner, Weizmann Institute of Science, Israel	I
16:30-16:55	<b>Title: Nano-fertilizers as an Alternative to Chemical Fertilizers</b> Asad M.F. Alkhader, National Agricultural Research Center, Jordan	I
16:55-17:20	<b>Title: Separation of Cellulose Nanocrystals from Natural Fibers using Ionic Liquids based on Hidrogensulphate Anion</b> Silvana Mattedi, Federal University of Bahia, Brazil	I

17:20-17:45	<b>Title: Highly Efficient Optical II-VI Diluted Magnetic Nanostructures Grown Directly on Silicon (111) Substrates</b>	
	Sukarno Olavo Ferreira, Universidade Federal de Viçosa, Brazil	
17:45-18:10	<b>Title: Chemical Modification of Carbon Nanomaterials and their Potential for Sustainable Technologies</b>	
	Brigitte Vigolo, University of Lorraine, France	
18:10-18:35	<b>Title: Magnetically Separable Nanocatalysts and their Applications</b>	
	Raed Abu-Reziq, The Hebrew University of Jerusalem, Israel	

### Closing the Conference for Day 1

## Day 2 | August 16, 2022

### Invited Session

<b>Session-02</b>	<b>Nanobio</b>
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**Session Chair: Ana Rosa Lopes Pereira Ribeiro, International Iberian Nanotechnology Laboratory, Portugal**

10:00-10:25	<b>Title: Nanostructures for Single-protein Characterisation</b>	
	Cuifeng Ying, Nottingham Trent University, UK	
10:25-10:50	<b>Title: Nanomaterials Exposure, Extracellular Vesicles Biogenesis and Adverse Cellular Outcomes: A Scoping Review</b>	
	Samantha A. Meenach, University of Rhode Island, USA	
10:50-11:15	<b>Title: Nanomaterials Exposure, Extracellular Vesicles Biogenesis and Adverse Cellular Outcomes: A Scoping Review</b>	
	Ana Rosa Lopes Pereira Ribeiro, International Iberian Nanotechnology Laboratory, Portugal	
11:15-11:35	<b>Coffee Break</b>	

<b>Session-03</b>	<b>Nanophotonics &amp; Nano Education &amp; Sustainable Electronics: Disassembling, Recycling and Eco-Design</b>
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**Session Chair: Evgeny Popov, Institut Fresnel, France**

11:35-12:00	<b>Title: Role of Critical Coupling for Extreme Enhancement of the Quality (Q)-factor and Mode Field Intensity in CRIGF Devices</b>	
	Evgeny Popov, Institut Fresnel, France	
12:00-12:25	<b>Title: Integrated Optical Sources and Optical Links with Nano-dimensioned Si AM LED's and Si Ge Detectors in a 0.35 <math>\mu\text{m}</math> IC process</b>	
	Lukas W. Snyman, University of South Africa, South Africa	
12:25-12:50	<b>Title: Relation Between Structure and Nonlinear Optical Response in Nanostructured Materials</b>	
	Raúl Rangel Rojo, CICESE, Mexico	
12:50-13:15	<b>Title: Hybrid Graphene/Silicon Integrated Photodetectors</b>	
	Ilya Goykhman, Technion - Israel Institute of Technology, Israel	

13:15-14:00	<b>Lunch Break</b>	
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<b>Session-04</b>	<b>Nanoelectronics &amp; Nanoplasmonics &amp; Nanotechnology &amp; Others</b>
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14:00-14:25	<b>Title: Effect of Quantum Confinement on Electrical Properties in GaInP Semiconductor Laser Diode Structures</b>	
	Mohammed Al-Ghamdi, King Abdulaziz University, Saudi Arabia	
14:25-14:50	<b>Title: Advanced Modeling of Emerging Magnetoresistive Memory</b>	
	Viktor Sverdlov, TU Wien, Austria	
14:50-15:15	<b>Title: Recent Progress in Phase Stability of Novel Nanocomposite Magnets</b>	
	Ovidiu Crisan, National Institute for Materials Physics, Romania	

<b>15:15-15:40</b>	<b>Title: X-ray Absorption Spectroscopy for Advanced Investigation of Energy Conversion and Conservation Materials</b> Chung-Li Dong, Tamkang University, Taiwan	<b>I</b>
<b>15:40-16:00</b>	<b>Coffee Break</b>	
<b>16:00-16:25</b>	<b>Title: Photonic Polymerase Chain Reaction with Plasmonic Gold and Silver Nanotriangles</b> Mr. Pradeep Kadu, IIT Bombay, India	<b>I</b>
<b>16:25-16:50</b>	<b>Title: Home 3D Printers, as a New Source of Nano-plastics</b> Ana G. Rodríguez Hernández, Universidad Nacional Autónoma de México, Mexico	<b>I</b>

### Poster Session

<b>P-001</b>	<b>Title: Optimization of TiO<sub>2</sub> Nanoparticles Preparation for Testing of Nanotoxicity in Pulmonary A549 Cells</b> Mrs. Jana Báčová, University of Pardubice, Czech Republic	
<b>P-002</b>	<b>Title: Surface Properties, Antibacterial Effect and Cytotoxicity of Cu layers Sputtered on Plasma Activated Glass</b> Ms. Veronika Lacmanova, University of Chemical Technology, Czech Republic	
<b>P-003</b>	<b>Title: Antibacterial Effect of Polyethylene Terephthalate Grafted with Silver Nanoparticles of Different Shape</b> Ms. Hoang Yen Nguyenova, University of Chemical Technology, Czech Republic	
<b>P-004</b>	<b>Title: Selectivity Enhancement of Carbon Nanotube Composite Sensor Response to Organic Vapours by Choice of the Polymer Matrix</b> Mr. Rostislav Slobodian, Tomas Bata University in Zlín, Czech Republic	

### Closing the Conference for Day 2

## Day 3 | August 17, 2022

### Virtual Presentations

#### Beijing Time Zone (GMT+8)

<b>09:00-09:40</b>	<b>Title: Ultra-high Bandwidth Applications of Integrated Kerr Optical Frequency Microcombs</b> David J. Moss, Swinburne University of Technology, Australia	<b>P</b>
<b>09:40-10:20</b>	<b>Title: Electrocatalytic Refinery for Renewable Fuels and Chemicals</b> Shi-Zhang Qiao, University of Adelaide, Australia	<b>P</b>
<b>10:20-11:00</b>	<b>Title: Identification of Solids for True Design and Precise Characterization of Functional Nanomaterials</b> Bunsho Ohtani, Hokkaido University, Japan	<b>P</b>
<b>11:00-11:40</b>	<b>Title: Sub-10-nm Patterning on Suspended Graphene by Using Focused He Ion Beam for Heat Phonon Engineering</b> Hiroshi Mizuta, Japan Advanced Institute of Science and Technology, Japan	<b>P</b>
<b>11:40-12:05</b>	<b>Title: Characteristics of Bismuth-Based Frequency Comb Laser</b> Yutaka Fukuchi, Tokyo University of Science, Japan	<b>I</b>
<b>12:05-12:45</b>	<b>Title: CVD Growth Frontiers of Industrial Graphene Materials</b> Zhongfan Liu, Peking University, China	<b>P</b>
<b>12:45-13:25</b>	<b>Title: Nanoprobes for Biosensing and Biomedicine</b> Huangxian Ju, Nanjing University, China	<b>P</b>
<b>13:25-14:05</b>	<b>Title: Dispersion Engineering in Si<sub>3</sub>N<sub>4</sub> Slot Waveguide for Different Applications</b> Yang Yue, Xi'an Jiaotong University, China	<b>P</b>

14:05-14:35	<b>Title: High Entropy Alloys by Atomic Layer Deposition</b> Alfred Tok, Nanyang Technological University, Singapore	K
14:35-15:00	<b>Title: To Manipulate Energy Gap of Lead-free Double Perovskite</b> Lixin Xiao, Peking University, China	I
15:00-15:25	<b>Title: High Mobility Emissive Organic Semiconductors and Devices</b> Huanli Dong, Chinese Academy of Sciences, China	I
15:25-15:50	<b>Title: Synaptic Transistor based on <math>\alpha</math>-In<sub>2</sub>Se<sub>3</sub> Nanosheets with Ultralow Power Consumption</b> Qing Chen, Peking University, China	I
15:50-16:15	<b>Title: Controlled Growth of High-quality Graphene Films: Manipulating the Crystal Orientation via Chemical Vapor Deposition</b> Luzhao Sun, Beijing Graphene Institute, China	I
16:15-16:40	<b>Title: Synthesis of Graphene Films towards Industrial Production</b> Fangzhu Qing, UESTC, China	I
16:40-17:20	<b>Title: Will be Updated Soon</b> Manoj Gupta, National University of Singapore, Singapore	P
17:20-17:50	<b>Title: Bio-inspired Skin Electronics and Optoelectronics based on 2D Materials</b> Hu Pingan, Harbin Institute of Technology, China	K

## Day 4 | August 18, 2022

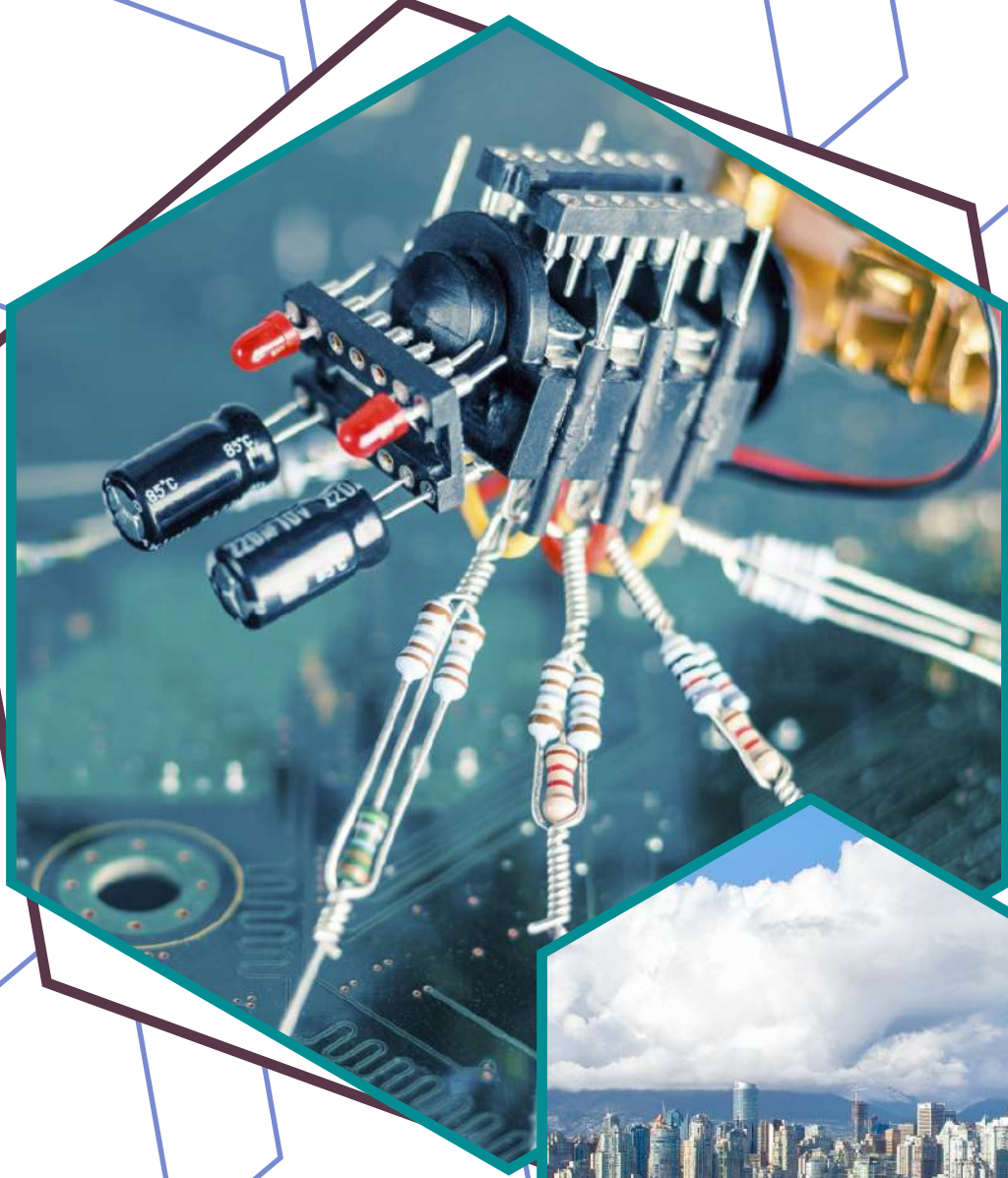
### Virtual Presentations

#### London Time Zone (GMT+1)

09:00-09:25	<b>Title: <math>\beta</math>-Amyloid Fibrils Catalyze Neurotransmitter Degradation</b> Elad Arad, Ben-Gurion University of the Negev, Israel	I
09:25-09:50	<b>Title: Deciphering Mammalian Gene Control at the Molecular Level</b> Anja Knaupp, Monash University, Australia	I
09:50-10:15	<b>Title: Synthesis and Characterization of Carbon Quantum Dots (CQD) Derived from Waste Biomass</b> Jolanta Pulit-Prociak, Cracow University of Technology, Poland	I
10:15-10:40	<b>Title: Biostatic Properties of Metal Oxides-Chitosan Nanohybrids</b> Ms. Wiktoria Matyjasik, Cracow University of Technology, Poland	I
10:40-11:05	<b>Title: Adhesion Improvement of Polymeric Nanofibers on Nitinol for Stent Applications</b> Mr. Thomas Schneiders, RWTH Aachen University, Germany	I
11:05-11:30	<b>Title: Tailor-made Drug and Gene Delivery Nanosystems to Mediate Antitumor Strategies</b> Henrique Faneca, University of Coimbra, Portugal	I
11:30-12:00	<b>Title: Will be Updated Soon</b> Vladimir I. Falko, The University of Manchester, UK	K
12:00-12:30	<b>Title: Integrating Artificial Intelligence and Nanotechnology for Real World Applications</b> Dhiya Al-Jumeily OBE, Liverpool John Moores University, UK	K
12:30-12:55	<b>Title: Synthesis and Characterization of , Phosphorus-doped TiO<sub>2</sub> for the Degradation of Priority Pollutant in Water</b> Kingsley Tamunokuro Amakiri, University of Huddersfield, UK	I
12:55-13:35	<b>Title: Will be Updated Soon</b> Pagona Papakonstantinou, Ulster University, UK	P

13:35-14:15	<b>Title: Recent Verification and Applications of the Einstein-Podolsky-Rosen Argument that "Quantum Mechanics is not a Complete Theory"</b> Ruggero Maria Santilli, The Institute for Basic Research, USA	P
14:15-14:55	<b>Title: Will be Updated Soon</b> Ya-Ping Sun, Clemson University, USA	P
14:55-15:25	<b>Title: X-ray Triggered Scintillating Nanoparticles Photosensitize Pancreatic Cancer and Stimulate a Systemic Immune Response</b> Sunil Krishnan, Mayo Clinic, USA	K
15:25-15:55	<b>Title: Uncover of the Universal Physical Mechanism that Enable the Formation of the Pick-up Resonances</b> Chi Yu Hu, California State University, USA	K

**End of the Virtual Session**



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AUGUST 17-19, 2023 | VANCOUVER, CANADA

3<sup>RD</sup> INTERNATIONAL MEET & EXPO ON NANOTECHNOLOGY

<https://www.albedomeetings.com/2023/nanomeet>