

PROGRAM

10th Nanotech & Nanomaterials Research Conference

 **November 06-08, 2024 | London, UK**

 **Renaissance London Heathrow Hotel, Bath Road,
Hounslow, Middlesex TW6 2AQ, London, UK**



Join Zoom Live Stream

<https://us06web.zoom.us/j/83640305228?pwd=fvptiMpdDq0B4ibwaDiLla674lLiv.1>

Meeting ID: 836 4030 5228

Passcode: 730370

09:00-09:20 Registration and Conference Material Collection

09:20-09:30 Introduction

Nanotechnology in Energy

@Waterloo

Chair: Doga Kavaz, Cyprus International University, Turkey

09:30-10:00 Numerical Analysis of a Ruffled Fin Type Automotive Car Radiator Operating with Different Particle-shaped Optimized Ternary Nanofluid
Doga Kavaz, Cyprus International University, Turkey **(Invited Speaker)**

10:00-10:25 The Use of Nanomaterials in Batteries
Valencia De La Vega, Nestpoint Group, USA

10:25-10:50 Microfluidic Sensing Textile for Continuous Monitoring of Sweat Glucose at Rest
He Zhao, East China University of Science and Technology, China

10:50-11:15 Green Loading of PdO Nanoparticles on to Activated Carbon and its Antibacterial Activities Against *Staphylococcus aureus* and *Escherichia coli*
Aisha Mohammed Al Musharraf, Sultan Qaboos University, Oman

11:15-11:40 Interfacial Engineering to Enhance Electrochemical Windows
Ming Chen, Huazhong University of Science and Technology, China

11:40-12:05 Coffee Break & Social Networking

@Near the Waterloo Suite

Nanomaterials Characterization

@Waterloo

12:05-12:30 Mechanical Properties of 3D Boron Nitride Foam
Yarden Mazal Jahn, Ben-Gurion University, Israel

12:30-12:55 Ultra-long Afterglow of 2D Transition Metal Dichalcogenides
Assaf Yaakovovitz, Ben-Gurion University, Israel

12:55-13:20 Magnetic Aerogels from FePt and CoPt₃ Synthesized in Organic Media
Larissa Schoske, University of Hamburg, Germany

13:20-13:30 Group Photo Session

13:30-14:30 Lunch Break

@Market Garden Restaurant

Chair: Giuseppe Cavallaro, University of Palermo, Italy

14:30-14:55 Biomacromolecules/Halloysite Hybrids for Biomedical Applications
Giuseppe Cavallaro, University of Palermo, Italy

14:55-15:20 Multi-functional Green Copper Mesh for Sustainable Membrane-based Water Treatment Technology
Hala Al-Jawhari, King Abdulaziz University, Saudi Arabia

15:20-15:45 **Multi-stimuli Controlled Properties of Shape Memory Polymer Composites from Biobased Benzoxazine-epoxy Copolymers Filled with Magnetic Nanoparticles**
Sarawut Rimdusit, Chulalongkorn University, Thailand

15:45-16:10 **Electrochemical Determination of Capsaicin at Platinum Electrode Modified by CuO Nanoparticle Functionalized with Multiwalled Carbon Nanotubes**
Omolola Esther Fayemi, North-West University, South Africa

Nanocomposites, Nanostructured and Nanoporous Materials

@Waterloo

16:10-16:35 **Biosynthesis, Characterization and Potential Antimicrobial Studies of Ag-MgO Nanocomposite Mediated from Talinum Fruticosum Leaf Extract**
Fonye Nyuyfoni Gildas, University of Yaounde I, Cameroon

Nano in Life Sciences, Medicine and Healthcare

@Waterloo

16:35-17:00 **Quantum Dots-hydrogel Composite for Drug Delivery and Cell Imaging Approaches**
Nurten Asina, Cyprus International University, Cyprus

17:00-18:00

Poster Presentations & Drinks

P01 **Seasonal and Daily Variations in Lung-deposited Surface Area of Ambient Fine PM in Los Angeles**
Constantinos Sioutas, University of Southern California, USA

P02 **Cellular Uptake of Spherical Gold Nanoparticles in PC-3 Cells: Dual-phase Kinetic Uptake and Modelling**
Gabriela Traplin, Toronto Metropolitan University, Canada

P03 **Phage-loaded Nanofibers: A Promising Nanobiopesticide Coating for Packaging Against Food Pathogens**
Fernanda Coelho, University of Sao Paulo, Brazil

P04 **Development of Biomimetic Doxorubicin-loaded Magnetic Nanoparticles for Targeted Breast Cancer Therapy**
Maria Julia Bistaffa, University of Sao Paulo, Brazil

P05 **Synthesis of NanoSAP for Harvesting Atmospheric Water for Human Consumption**
Valquiria De Campos, UNESP, Brazil

P06 **Metal Bionanoparticles: Optimization of Mycosynthesis, Characteristics and Antimicrobial Activities Against Crop Pathogens**
Patrycja Golinska, Nicolaus Copernicus University in Torun, Poland

P07 **Biosynthesized Metal Nanoparticles with Antimicrobial Activity for Stimulation of Plant Growth**
Joanna Trzcinska-Wencel, Nicolaus Copernicus University in Torun, Poland

P08 **Preparation, Structural Characterization, Optical, Photoluminescence, AC Electrical Conductivity and Broadband Dielectric Properties of WO₃ Reinforced PEG/CS Blend for Futuristic Optoelectronic and Energy Storage Devices**
Maha Abdullah A. Alqarni, University of Jeddah, Saudi Arabia

P09 **Comparison of Induction of Fibrosis on 2D Cell Culture and 3D Bioprinted Scaffolds Using Methotrexate**
Mrunmayi Ashish Gadre, Manipal Centre for Biotherapeutics Research, India

19:00-20:30 **Social and Networking Dinner (Ticket Required)**

@Market Garden Restaurant

End of Day 01

PROGRAM

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Nano in Life Sciences, Medicine and Healthcare

@Waterloo

Chair: Arthur McClelland, Harvard University, USA

09:00-09:25 **Surface Enhanced Raman Scattering (SERS) for Low Concentration Molecular Detection Applications**

Arthur McClelland, Harvard University, USA

09:25-09:50 **Enhancing Charge Transfer on Graphene Surface-enhanced Raman Spectroscopy by Adjusting Graphene's Fermi Energy**

Samar A. Ghopry, Jazan University, Saudi Arabia

09:50-10:15 **Au Nanodyes as Enhanced Contrast Agents in Wide Field Near Infrared Fluorescence Lifetime Imaging**

Neelima Chacko, Ariel University, Israel

10:15-11:40 **Coffee Break & Social Networking**

@Near the Waterloo Suite

11:40-12:05 **Condensation-assisted Hazardous Vapor Detection on 3D Gold Nanoparticle SERS**

Pratiksha P. Mandrekar, Kongju National University, Korea (South)

12:05-12:30 **Improved pDNA-loading in Lipid NPs Through Microfluidics: Optimization and *In-vitro* Trials**

Jason Thomas Duskey, University of Modena and Reggio Emilia, Italy

12:30-12:55 **Improving Cancer Diagnosis via Nanofabricated Colorimetric Histology Platforms**

Brian Abbey, La Trobe University, Australia

12:55-14:00 **Lunch Break**

@Market Garden Restaurant

Chair: Carla Serri, University of Sassari, Italy

14:00-14:30 **Hyaluronic Acid: Development and Application in Drug Delivery Systems**

Carla Serri, University of Sassari, Italy (**Invited Speaker**)

14:30-14:55 **Comparison of Induction of Fibrosis on 2D Cell Culture and 3D Bioprinted Scaffolds Using Methotrexate**

Mrunmayi Ashish Gadre, Manipal Centre for Biotherapeutic Research, India

14:55-15:20 **Altering the Mechanical Properties of Self-assembled Bacterial Filaments Through Protein Engineering**

Neta Sal-Man, Ben-Gurion University, Israel

Nano in Food & Agriculture

@Waterloo

15:20-15:45 **Seed Priming with Zinc Oxide Nanoparticles: An Innovative Approach to Alleviate Cobalt-induced Stress and Enhance Maize Growth**

Yinbo Gan, Zhejiang University, China

15:45-16:10 **Transcriptomics of Temperature-sensitive R Gene-mediated Resistance Identifies a WAKL10 Protein Interaction Network**

Henrik Stotz, University of Hertfordshire, UK

16:10-16:40 **Coffee Break & Social Networking**

@Near the Waterloo Suite

End of Day 02

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Track-1

Moderator: Francesca Maestrelli, University of Florence, Italy

- 09:00-09:20 **Piezo-phototronic Effect in Multi-layer Structured Optoelectronic: Bilateral Piezoelectric Charge Modulation**
Wenbo Peng, Xi'an Jiaotong University, China
- 09:20-09:40 **MoS₂-ZnIn₂S₄/Single Layer Graphene Oxide (SLGO): A Noble Metal Free Photocatalyst for Enhanced Photocatalytic Hydrogen Evolution**
Fizza Siddique, Minzu University of China, China
- 09:40-10:00 **Glycyrrhizic Acid/Carbon Nanozyme Injectable Hydrogel Promotes Wound Healing of Multiple Bacterial Infections**
Chen Xu, Jilin Agricultural University, China
- 10:00-10:20 **Structural Dynamics Analysis of E3 Ubiquitin Ligase, E6AP HECT Domain, Revealed by High-speed Atomic Force Microscopy**
Hiroki Konno, Kanazawa University, Japan
- 10:20-10:40 **Novel Photothermal Magnetic Membranes for Solar-driven Desalination**
Norhan Nady, City of Scientific Research and Technological Applications (SRTA-city), Egypt
- 10:40-11:00 **Bioinspired Synthesis of Magnetic Nanoparticles Based on Iron Oxides Using Orange Waste and Their Application as Photo-activated Antibacterial Agents**
Maria Paulina Romero, Escuela Politecnica Nacional, Ecuador
- 11:00-11:30 **The Impact of Nanomedicine: 30,000 Orthopedic Nano Implants with No Failures and Still Counting**
Thomas J. Webster, Mansfield Bioincubator, USA (Virtual-Keynote)

11:30-11:35 Break

Track-2

Moderator: Emiliano Laudadio, Polytechnic University of Marche, Italy

- 11:35-11:55 **Synthesis and Functionalization of Silica Nanoparticles with Silver Ions as a Hydrophobic and Antibacterial Fabric Coating**
Alexis Alejandro Salazar Navarro, Autonomous University of Baja California, Mexico
- 11:55-12:15 **Impact of Temperature and External Field Driving Rate on Disordered Antiferromagnetic-ferromagnetic Bilayers**
Svetislav Mijatovic, University of Belgrade, Serbia
- 12:15-12:35 **Broad-spectrum Antimicrobial ZnMintPc Encapsulated in Magnetic-nanocomposites with Graphene Oxide/MWCNTs Based on Bimodal Action of Photodynamic and Photo-thermal Effects**
Maria Paulina Romero, Escuela Politecnica Nacional, Ecuador

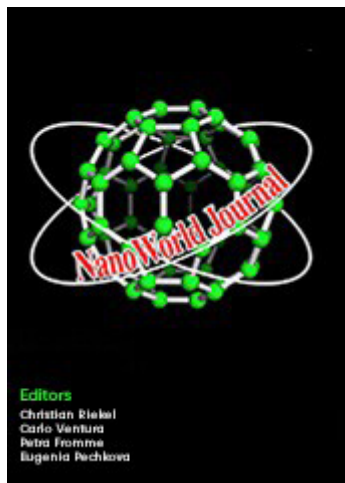
- 12:35-12:55 **The Use of Graphene for Asymmetric Diodes and the Role of Defectiveness Degree for Energy Harvesting Applications**
Emiliano Laudadio, Polytechnic University of Marche, Italy
- 12:55-13:15 **The Multiscale Architecture of Biomembranes and Vesicles**
Reinhard Lipowsky, Max Planck Institute of Colloids and Interfaces, Germany
- 13:15-13:35 **Silicon Nanoneedles for Sustained Treatment of Ocular Angiogenesis**
Yannis M. Paulus, University of Michigan, USA
- 13:35-13:55 **Early Detection of Lung Cancer via *miR-155* and Surface Enhanced Raman Spectroscopy (SERS)**
Christina Quin, Lincoln Sudbury Regional High School, USA
- 13:55-14:15 **Transition Metal Dichalcogenide Nanoribbons with Atomic Adsorbates as Elements of Nanospintronics**
Frank Hagelberg, East Tennessee State University, USA
- 14:15-14:20 **Break**

Track-3

Moderator: Francesca Maestrelli, University of Florence, Italy

- 14:20-14:40 **Patterning Optimization for Device Realization of Patterned GaAsSbN Nanowire Photo Detectors**
Sean Johnson, High Point University, USA
- 14:40-15:00 **Biochemical Responses of Coffea Arabica Var. Borbon to Foliar Exposure of Copper Doped Silica Chitosan Oligosaccharides Nanoparticles**
Alexis Alejandro Salazar Navarro, Autonomous University of Baja California, Mexico
- 15:00-15:20 **Chemically Modified Liposomal siRNA Formulation Targeting SOD1 for Chemosensitization of Platinum-resistant Ovarian Cancer**
Attila Szenasi, University of North Carolina at Chapel Hill, USA
- 15:20-15:40 **Bioinspired Nanocomposite for Passive Cooling**
Hong Li, Nanyang Technological University, Singapore
- 15:40-16:00 **Liposomal Drug Delivery to Target Hypoxic Tumor Environment**
Adam WG Alani, Oregon State University, USA
- 16:00-16:20 **Control of Dynamic Percolation Kinetics in Electrically Conductive Pastes Containing Multi-walled Carbon Nanotubes Using Chemical Factors**
Masahiro Inoue, Gunma University, Japan
- 16:20-16:40 **Oral Administration of pH-responsive Polymeric Nanoparticles Based on Zein and Their Therapeutic Potential on Cancer**
Bruno Alejandro Valades-Aguilar, Autonomous University of Nuevo Leon, Mexico
- 16:40-17:00 **Exploring Hollow Gold Nanoparticles as Multifunctional Therapeutic Platforms for the Treatment of Breast Cancer (Invited Speaker)**
Zeljka Krpetic, University of Salford, UK
- 17:00-17:05 **Closing Remarks**

End of Day 03



Nano World Journal

Christian Riekel and Dr. Eugenia Pechkova

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Scope, Aims & Topics

NanoWorld Journal (NWJ) is a quarterly, peer-reviewed, open access journal that publishes original research articles, reviews, letters to the editor, and technical notes on the solutions to the problems faced by human race through Nanotechnology and Nanosciences. The scope of the NWJ is centered in the key sectors (energy, environment, space, hardware, and cancer) from which depends on human progress and survival, with the aims to enhance worldwide cooperation in Research and Development. With the NWJ we aim to provide the highest coverage to these fields in order to achieve the scope to help to overcome problems too frequently underestimated and growing from energy to environment and natural disasters, from cancer to hardware and space.

Through publication of rigorously peer-reviewed scholarly communications, NWJ will become a world-class scientific journal and an invaluable resource for researchers, engineers, physicists and healthcare professionals across different research areas of nanoscience and technology.

The authors are encouraged to submit articles that address the following list of pertinent topics, or other topics of interest to nanoscience and technology community.

- Nanomedicine
- Nanobiotechnology
- Nanomaterials
- Nanopores
- Molecular Nanotechnology
- Nanoenergy
- Materials Science
- Nanoparticles
- Graphene
- Cancer Nanotechnology
- Nanotubes
- Nanosensors
- Nanoengineering
- Nanotechnology Drug Delivery
- Nano-Forensics
- Nano Chemistry
- Nano Phyto Pharmacy

We wish to see you@
Nano Rome 2025

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