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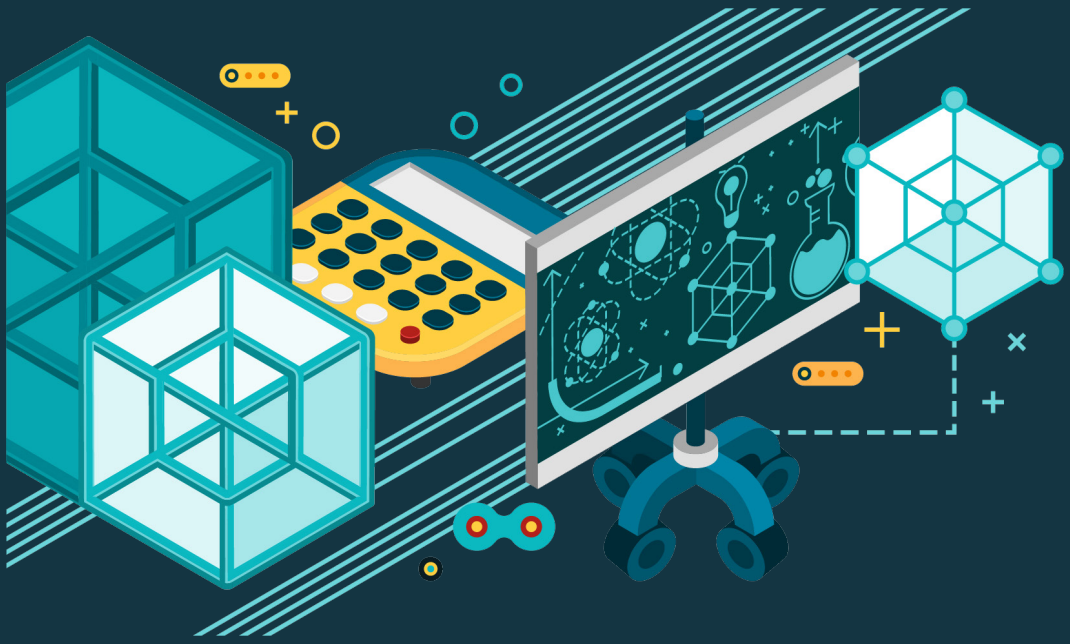
Nano Boston-2026

November 9-11, 2026 | Boston, MA

PROGRAM

12th Nanotech & Nanomaterials Research Conference

November 9-11, 2026 | Boston, MA | Hybrid



Four Points by Sheraton Wakefield Boston
Hotel & Conference Center

nwc@uniscigroup.org

https://nano.unitedscientificgroup.org/

Day-01

In-Person

Monday, November 9, 2026 | Boston, MA

Room: Wakefield

Join Zoom Meeting:
https://us06web.zoom.us/j/82892954637?pwd=2aHkMGYfOjrCxtKeqOpxjTlz4bLl7g.1

Meeting ID: 828 9295 4637
Passcode: 861340

07:30-09:00 Registration and Badge Pickup

09:00-09:10 Introduction

Scientific Session I

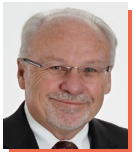
Plenary Presentation

Chair: Doga Kavaz, Cyprus International University, Turkey



09:10-09:50
Nanomedicine in Humans: From Eliminating Implant Infection to Implantable Sensors to AI
Thomas J. Webster, Brown University, Providence, RI

Keynote Presentations



09:50-10:20
Plastic-based Nanopore Sensor for DNA/RNA Analyses
Steven A. Soper, University of Kansas, Lawrence, KS

10:20-10:50 Coffee & Networking @Ballroom Foyer & Wakefield Foyer



10:50-11:20
mRNA Formulation Development: Vaccines and Beyond
Shrirang Karve, Global Head of Delivery and Formulations at the mRNA Center of Excellence at Sanofi, Boston, MA

Scientific Session II

Featured Presentations

11:20-11:45 **Receptor-targeting X-ray/CT NanoContrast Agents for Breast Cancer Detection**
Manos Gkikas, Northeastern University, Boston, MA

11:45-12:10 **Drug-integrated Amphiphilic Nano-Assemblies (DIANAs) for Targeted Immunotherapies and Clinical Translation in Type 1 Diabetes**
Diana Velluto, University of Miami, Coral Gables, FL

12:10-12:20 Group Photo

12:20-13:20 Networking Lunch @Restaurant

13:20-13:45 **Green Nanotechnology Beyond Synthesis: Natural Bioactive Resources as Building Blocks for Multifunctional Nanomaterials**
Doga Kavaz, Cyprus International University, Turkey

13:45-14:10 **Olive Oil Nanoemulsion Containing Curcumin: Antimicrobial Agent Against Multidrug-resistant Bacteria**
Maine Virginia Alves Confessor, Unifacisa University Center, Brazil

14:10-14:35 **Controlled Co-delivery of Doxorubicin and Paclitaxel in Targeted Lipid-polymer Hybrid Nanocapsules: Physicochemical Characterization and *In-vitro* Anticancer Evaluation**
Nurten Asina, Cyprus International University, Cyprus

14:35-15:00 **Improved Electrochemical Performance of Li-ion Battery-based $Li_4Ti_5O_{12}$/X (X = Si, V_2O_5) Composite Anodes**
Merazga Saloua, Semiconductor Technology Research Center for Energetics - CRTSE, Algeria

15:00-15:25 **TBA**
Tingying Helen Zeng, InnoBridge Institute, Cambridge, MA

15:25-16:30 Posters & Coffee @Ballroom Foyer & Wakefield Foyer

Interaction of Photoactive Copolymers with Fluorescent Nanoparticles to Create Light-sensitive Films: Optical and Morphological Properties of UV-vis Stimulus-responsive Films
Guadalupe Pizarro, Metropolitan Technological University (UTEM), Chile

Synthesis and Characterization of Poly (maleic anhydride-alt-acrylic acid) Functionalized with a Photochromic Agent and Stabilized with CdTe Quantum Dots for Biological Applications
Tomas Ignacio Valdes Palma, Metropolitan Technological University (UTEM), Chile

Nanostructured Platforms for Ultralow-concentration Molecular Quantification Combining Dynamic SERS and Shape-induced Enhanced Raman Scattering (SIERS)
Deysiane Alves Lima dos Santos, University of Victoria, Canada

Early Detection of Pancreatic Cancer via Surface-enhanced Raman Spectroscopy of microRNA-21-5p Using Gold Nanoparticles
Michael Qiao, Innobridge Institution, Cambridge, MA

Carbon Quantum Dots Synthesized from Chlorophyll for Optoelectrical Devices
David Wu, Avenues New York, New York, NY

Exploration of Microplastics Uptake in Vegetables for Public Health
Irene Tian, The Winsor School, Boston, MA

Early Liver Cancer Diagnosis Using PIVKA-II Biomarker Through SERS Nanosensing
Jiaming Xu, St. George's School, Middletown, RI

Carbon Quantum Dot Nanocomposites for Capacitor Applications
Ray X. Xue, Innobridge Institute, Cambridge, MA

Enhanced Broadband Photoresponse in Plasma-printed AgNP–CuO MSM Photodetectors
Soumadeep De, Norfolk State University, Norfolk, VA

Sustainable Phyto-mediated Synthesis and Multiscale Structure-property Evaluation of Metal Oxide Nanoparticles for Visible-light-driven Organic Pollutant Degradation
Harpreet Kaur, Chandigarh University, India

16:30-17:30 Networking Drinks @Ballroom Foyer & Wakefield Foyer

End of Day 01

Day-02

In-Person

Monday, November 9, 2026 | Boston, MA
Room: Wakefield

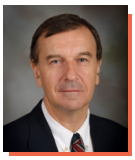
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Scientific Session III

Keynote Presentations

Chair: Sean M. Johnson, High Point University, High Point, NC



09:00-09:30
Constrained RESET–driven Filament Strengthening for Analog Neuromorphic ReRAM
Marius K. Orlowski, Virginia Tech, Blacksburg, VA



09:30-10:00
C_3N_4 Shape–dependent Antibacterial and Corrosion Resistance NiP–C_3N_4/CeO_2 Nanocomposite Coatings
Aboubakr M. Abdullah, Qatar University, Qatar

10:00-10:30 Coffee & Networking @Ballroom Foyer & Wakefield Foyer

Featured Presentations

10:30-10:55 **Carrier Transport Characterization in Metal-contacted III-V Nanowire Devices**
Sean M. Johnson, High Point University, High Point, NC

10:55-11:20 **Nanomaterial-enabled Protective Coatings for Infrastructure: Experimental Evaluation and AI-assisted Performance Prediction**
Zhibin Lin, University of Texas at Arlington, Arlington, TX

11:20-11:45 **Development of Nanofiber-coated Track-etched Composite Membranes for Water Purification**
Chris Bode-Aluko, Wentworth Institute of Technology, Boston, MA

11:45-12:10 **Tuning Colloidal Stability and Drug Loading in EGaIn Nanoparticles via Cyclodextrin-based Surface Functionalization**
Sumeyra Gokalp, University of Massachusetts Boston, Boston, MA

12:10-12:25 **Piezoelectric Atomization Effects on Silver Nanoparticle Track Formation by Atmospheric-pressure Plasma Jet Printing**
Soumadeep De, Norfolk State Univeristy, Norfolk, VA

12:25-12:40 **Toward Breath-based Diagnostics via Water-mediated Capture of Synthetic Breath Biomarkers in SERS-active Plasmonic Nanogaps**
Aashini Shah, Massachusetts Institute of Technology (MIT), Cambridge, MA

End of Day 02

Day-03

Virtual

Wednesday, November 11, 2026
Boston, MA

Join Zoom Meeting:
https://us06web.zoom.us/j/82892954637?pwd=2aHkMGYfOjrCxtKeqOpxjTIz4bLI7g.1

Meeting ID: 828 9295 4637
Passcode: 861340

Virtual Session

07:00-07:10 Introduction

Featured Presentations

07:10-07:30 **A Molecular Editing Platform for Iterative DNA Data Storage and Rewriting**
Ilaria Sandei, Imperial College London, UK

07:30-07:50 **Engineering Novel Polymer Based Nano-composite Thin Films with Enhanced Dielectric Properties for Small Scale Display Applications**
Nayantara Srinivasan, University of Oxford, UK

07:50-08:10 **Antibacterial and Antitumor Application of Carbon Dots Based on Natural Products for Photodynamic/ Photothermal Effects**
Maria Paulina Romero, National Polytechnic School, Ecuador

08:10-08:30 **Green-engineered Ag-Ni-Co Trimetallic Nanocomposites: A Synergistic Approach to Photocatalysis and Biomedical Therapy**
Parvathalu Kalakonda, Osmania University, India

Keynote Presentations



08:30-09:00
Sustainable Nanoparticles for Combating Antimicrobial Resistance and Cancer
Priyanka Singh, Denmark Technical University, Denmark



09:00-09:30
Transparent Photothermal Solar Tunnel Based on Fe_3O_4@Cu_2-xS Nanocomposite Thin Films for Passive Solar Heating of Buildings
Donglu Shi, University of Cincinnati, Cincinnati, OH

Featured Presentations

09:30-09:50 **Charge-transfer Plasmonics and Nanophotonics in Graphene Heterostructures**
Zhe Fei, Iowa State University, Ames, IA

09:50-10:10 **Metal Oxide Nanocomposites for Dye Removal from Water: A Review**
Thamer Adnan Abdullah, University of Technology, Iraq

10:10-10:30 **Green Fabrication of Chitin-nanocrystal-stabilized Polythiophene Nanocomposites for Sensitive Detection of Toxic Metal Ions**
Oumaima Fakraoui, University of Sfax, Tunisia

10:30-10:45 **Effect of Sputtering Pressure on the Optical Properties of Nanoscale Thin Films Alloy Ag–Alx**
Annie Yu, Labforinvention Corp, Fremont, CA

10:45-11:05 **Active Antimicrobial Packaging Based on ZnO Nanoparticles: A Sustainable Strategy to Combat Microbial Spoilage in Perishable Foods**
Sirine Mhiri, University of Sfax, Tunisia

11:05-11:25 **Facile Hydrothermal Synthesis of Fluorescent Mo-based Transition Metal Dichalcogenide Quantum Dots for Advanced Sensing Platforms**
Syrine Affes, University of Sfax, Tunisia

11:25-11:45 **Development of L-Methionine-modified ZnO Nanoparticles as a Feed Additive in Poultry Nutrition**
Yosra Hadj Kacem, University of Sfax, Tunisia

11:45-12:05 **From Bulk to Nanosheets: Tailoring MoS_2 and $MoSe_2$ via Surfactant-assisted Exfoliation for Tunable Electrochemical Interfaces**
Ratiba Wali, University of Sfax, Tunisia

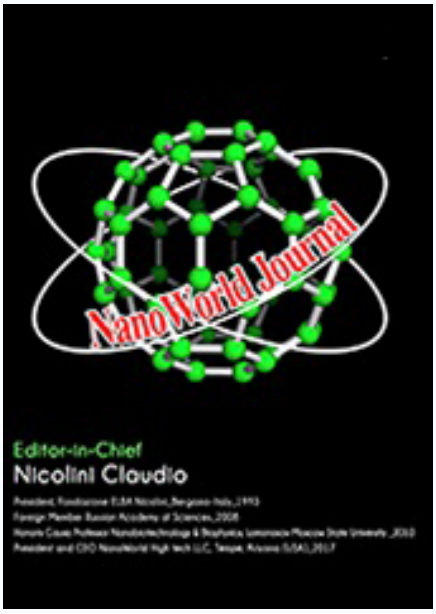
12:05-12:25 **Controlled *in situ* Polymerization of PEDOT on Chitin Nanocrystals for Sustainable Flexible Solid-state Supercapacitors**
Fadwa Gharsallah, University of Sfax, Tunisia

12:25-12:40 **Hybrid Conducting Nanoarchitectures Based on Polyaniline-grafted Chitin Nanocrystals: Dielectric and Mechanical Performance**
Chaima Bouaziz, University of Sfax, Tunisia

Closing Remarks

End of Day 03

NWJ NANOWORLD JOURNAL



Interim Co Editor-in-Chief

Dr. Christian Riekel and Dr. Eugenia Pechkova graciously agreed to serve as Interim Co-Editors-in-Chief, until a successor for Dr. Claudio Nicolini is identified.

Former Editor-in-Chief

Professor Claudio Nicolini (1942- 2023) **Obituary**

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We wish to see you@

Nano Rome 2027

October 25-26, 2027 | Rome, Italy

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