

VIRTUAL-ZOOM MEETINGS

NANO BOSTON CONFERENCE-2021

OCTOBER 18-20, 2021,

Meeting Time Zone EDT (UTC/GMT -4:00 hours)

Local Time: Boston

Supported by:
NanoWorld Journal



Monday
Oct 18, 2021

Day 1

07:30

Join the Meeting (AV Check)

07:50

Opening Remarks and Introduction

Keynote Talks

Chair: Anu Puri, NIH/NCI, MD, USA

08:00

Impact of Nanobiotechnology on the Future of Pharmaceuticals and Nutraceuticals: The Road toward Precision Medicines –Case Studies

Shaker Mousa, Albany College of Pharmacy and Health Sciences, NY, USA

08:40

Induction of Immune Tolerance Using Antigen-encapsulating PLGA Nanoparticles Operates by Signaling via the cGAS/STING Pathway

Stephen D. Miller, Northwestern University Medical School, IL, USA

09:20

Preventing the Next Pandemic with Broad-Spectrum, Self-Disinfecting Antimicrobial Polymers

Richard Spontak, North Carolina State University, NC, USA

10:00

Welcome the Spring of the Third Milestone in Pharmaceutical Drug Development: RNA Therapeutics

Peixuan Guo, The Ohio State University, OH, USA

Session: Nano-enabled Biomarker, Drug Delivery and Therapeutics

Chair: Shaker Mousa, Albany College of Pharmacy and Health Sciences, NY, USA

10:40

Orally Targeted Delivering Drugs to Diseases

Xing Zhou, Chongqing University of Technology, China

11:00

Engineering of Nanomaterials for Drug Delivery and Bio-Sensing

Beatrice Fortuni, KU Leuven, Belgium

11:20

Chlorogenic Acid Nanoemulsion: As an Effective Skin Whiting Formulation

Yasemin Budama-Kilinc, Yildiz Technical University, Turkey

11:40

Nanocomposites of Nylon 6 and Carbon Nanoparticles Modified with Aminos and Acids Groups for the Adsorption of Uric Acid

Christian Javier Cabello Alvarado, Center for Research in Applied Chemistry, Mexico

12:00

Nanowired Drug Delivery for Neuroprotection in Traumatic Brain Injury

Ala Nozari, Harvard Medical School, MA, USA

Emerging Researcher Presentations

- 12:20** Preparation and Application of Multifunctional Nanoparticles with Hemostasis and Regulating Blood Coagulation
Qing Zhang, Chongqing University of Technology, China
- 12:35** Inorganic Nanoparticles in Drug Delivery
Tanya Singh, Jamia Hamdard, India
- 12:50** The Development of a Multifunctional Drug Delivery System for Efficient Cancer Cell Targeting in 3D Cell Models
Indra Van Zundert, KU Leuven, Belgium

E-Poster

- 13:05** Solid State Photoreduction of Silver on Mesoporous Silica to Enhance Antifungal Activity
Giulia Quaglia, University of Perugia, Italy

13:15

Break

Session: Nanomedicine, DNA Nanotechnology

Chair: Richard Spontak, North Carolina State University, NC, USA

- 13:30** Nanomedicine and Brain Diseases
Giovanni Tosi, University of Modena and Reggio Emilia, Italy
- 13:50** MicroRNA-124-3p-enriched Small Extracellular Vesicles as A Promising Therapeutic Approach for Parkinson's Disease
Liliana Bernardino, University of Beira Interior, Portugal
- 14:10** DNA-Scaffolded Nanoreactors for Biomimetic Catalysis and Molecular Sensing
Jinglin Fu, Rutgers University-Camden, NJ, USA
- 14:30** Development of DNA Education Modules for Middle School, High School, and Undergraduate Students and Educators
Michael W Hudoba, Otterbein University, OH, USA

Emerging Researcher Presentations

- 14:50** Quantification of DNA Damage Induced Repair Focus Formation *via* dSTORM Localization Microscopy
Varga Dániel, University of Szeged, Hungary

E-Poster

- 15:05** Modulating Cell Motions Using pH Responsive DNA Origami
Deepak Karna, Kent State University, OH, USA

Session: Cancer Nanotherapeutics

Chair: Hai-Feng Ji, Drexel University, PA, USA

- 15:15** Multifunctional Stimuli-Responsive Systems for Sensing and Therapy
Helena Iuele, CNR NANOTEC Institute of Nanotechnology, Italy
- 15:35** Nano-pharmaceuticals: A Transformative Way for Cancer Treatments
Murali M. Yallapu, University of Texas Rio Grande Valley (UTRGV), TX, USA
- 15:55** Oxime Ether Lipids, A Novel Class of Cationic Molecules for Delivery of Functional DsiRNA to A549 Tumors
Anu Puri, NIH/NCI, MD, USA
- 16:15** Cancer Nanotechnology: Determining the Effect of Nano-based Therapeutics in Cancer Cells vs. Normal Cells
Devika Chithrani, University of Victoria, Canada
- 16:35** New Multi Dimensional AFM modes to Identify Cells Using Machine Learning
Igor Sokolov, Tufts University, MA, USA
- 16:55** Nanotechnology-based Tools for Glioblastoma and Secondary Brain Cancers
Shanta Dhar, University of Miami Miller School of Medicine, FL, USA
- 17:15** Using Transferrable Graphene-based Membranes for Spatial and Temporal Control of Cell Cultures
Keith Whitener, U.S. Naval Research Laboratory, D.C., USA

Emerging Researcher Presentations

- 17:35** Small Molecule-based EGFR Targeting of Biodegradable Nanoparticles Containing Temozolomide and Cy5 Dye for Greatly Enhanced Image-guided Glioblastoma Therapy
Rebecca R. Schmitt, University at Buffalo, NY, USA

E-Posters

- 17:50** Preparation and Characterization of Stable Nanoliposomal Formulations of Curcumin with High Loading Efficacy: *in vitro* and *in vivo* Anti-tumor Study
Maryam Karimi, University of Maryland, MD, USA

Tuesday
Oct 19, 2021

Day 2

- 08:00** Join the Meeting (AV Check)
- 08:15** Introduction

Keynote Talks

Chair: Vishal Sharma, Cluster University of Jammu, India

- 08:20** Mechanisms of Reductions Catalyzed by M(0)-nanoparticles
Dan Meyerstein, Ariel University, Israel
- 09:00** Chemistry Beyond Conventional Wisdom
Puru Jena, Virginia Commonwealth University, VA, USA

Session: Nanotechnology & Societal Aspects

09:40 **Cannabinoids in Tears: Novel Biomarker for Forensic Use**
Denise A Valenti, IMMAD, LLC, MA, USA

10:00 **The Role of IP in Nanotechnology Innovation**
Monica Patel, Keltie LLP, United Kingdom

Emerging Researcher Presentations

10:20 **Investigating Factors Influencing Consumer Willingness-to-pay for Nanopesticides**
Peiyuan Liu, University of California, CA, USA

Session: Nano Electronics

10:35 **Integrated Electrical System Based AD5933 Impedance Analyzer: Towards Multi-Selective Detection of Complex Gas Mixtures in IoT Micro-Systems**
Bilel Hafsi, Institute of Electronics, Microelectronics and Nanotechnology (IEMN), France

10:55 **Soft Nanomaterials as Plasmonic Systems**
Brigita Rozic, Jozef Stefan Institute, Slovenia

11:15 **Sensitive Interferometric Plasmon Ruler Based on a Single Nanodimer**
Alfred J. Meixner, University of Tuebingen, Germany

11:35 **Octahedral Distortion Driven by CsPbI₃ Nanocrystals Reaction Temperature – The Effects on Phase Stability and Beyond**
Paola Vivo, Tampere University, Finland

11:55 **Investigation of Semiconductor Nanowires Using X-ray Diffraction Methods**
Sergey Lazarev, National Research Tomsk Polytechnic University (TPU), Russia

12:15 **New and Emerging Van der Waals Semiconductors for Electronic and Photonic Applications**
Moh R. Amer, University of California, Los Angeles, CA, USA

12:35 Break

Chair: **Moh R. Amer**, University of California, Los Angeles, CA, USA

12:55 **Thickness and Spin Dependence of Raman Modes in 2D Magnet Fe₃GeTe₂**
Liangbo Liang, Oak Ridge National Laboratory, TN, USA

13:15 **Design and Simulation of Fundamental Building Blocks for All-Optical Computers (Universal Gates Only)**
Saif Hasan Abdalnabi, Imam Ja'afar Al-sadiq University, Iraq

13:35 **Active Polymer: Perovskite Nanocrystals Blends as Possible Active Materials for Photonics and Optoelectronics Devices**
Marco Anni, Università del Salento, Italy

- 13:55** **Plasmonic Nanoresonators Embedded into Active Shells Optimized for Near-field and Far-field Stimulated Emission**
Maria Csete, University of Szeged, Hungary
- 14:15** **Enhancement of THz Detection by Using an Asymmetric-Dual-Grating-Gate Graphene FET**
Juan Antonio Delgado Notario, CENTERA Laboratories, Institute of High-Pressure Physics PAS, Poland
- 14:35** **New D-A-D Systems Containing Porphyrin Cores as Electron Donors for BHJ-SMOSCs**
Pilar de la Cruz, Universidad de Castilla-La Mancha, Spain
- 14:55** **Optimization of Silver Chalcogenide Quantum Dots for NIR-II Photodetectors**
Jianying Ouyang, National Research Council Canada, Canada

E-Posters

- 15:15** **Quantum Switching in Y-shaped Nanostructures**
Trevor McDonough, SUNY University at Buffalo, NY, USA
- 15:25** **Surface Modification and Characterization of Germanium Nanoparticles**
Viktoriia Slynchuk, Eberhard Karls University of Tuebingen, Germany
- 15:35** **A New Reductant in Gold Cluster Chemistry Gives a Superatomic Gold Gallium Cluster**
Florian Fetzer, University of Tuebingen, Germany
- 15:45** **Molecular Biology and Microorganisms Brownian Motion Fractal Nature**
Bojana Markovic, Serbia and Institute of Technical Sciences of SASA, Serbia

Wednesday
 Oct 20, 2021

Day 3

08:15 **Join The Meeting (AV Check)**

08:35 **Introduction**

Keynote Talk

Chair: Ramzi Maalej, University of Sfax, Tunisia

08:40 **Energy, Cost and Carbon Reduction by Utilizing Functionalized Nanodiamond-Enhanced Fluids in Industrial Facilities**
Ethan Ehsan Languri, Tennessee Tech University, TN, USA

Session: Nano Engineering & Nanomaterials for Energy & Environment

09:20 **Nanomaterial Design for Solar Driven Water Desalination**
Zhengtao Zhu, South Dakota School of Mines and Technology, SD, USA

09:40 **Metalloid Group 11 Clusters: Novel Structures and Properties**
Andreas Schnepf, University of Tübingen, Germany

- 10:00** **Green Synthesized Nanomaterials for Diverse Applications**
Doga Kavaz, Cyprus International University, Turkey
- 10:20** **On the “Super” Storage of Hydrogen in Graphite Nanofibers**
Yury S. Netchaev, Kurdjumov Centre of Metals Science and Physics, Russia
- 10:40** **Emerging Technologies: From Risk Assessment to Risk Governance and Safety by Design**
Christopher L. Cummings, North Carolina State University, NC, USA
- 11:00** **Investigation of Cellulose Nanocrystals (CNC) and Cellulose Nanofibers (CNF) as Thermal Barrier and Strengthening Agents in Pigment-Based Paper Coatings**
Brenda Hutton-Prager, University of Mississippi, MS, USA

11:20 **Break**

Chair: Doga Kavaz, Cyprus International University, Turkey

- 11:40** **New Optical Sensor Based on Au@MX₂ Hybrid for The Detection at Low Traces**
Ramzi Maalej, University of Sfax, Tunisia
- 12:00** **Uniform Energy Deposition via Optimized Passive and Active Plasmonic Nanoresonator Distributions**
Maria Csete, University of Szeged, Hungary
- 12:20** **Atomic Oxygen Exposure Effect on Electromagnetic Reflectivity of Small Satellites**
Andrea Delfini, Sapienza University of Rome, Italy
- 12:40** **Cell-free Biosynthesis Exploiting Nanoparticle Scaffolds and Enzymatic Channeling**
Igor L. Medintz, U.S. Naval Research Laboratory, Washington D.C., USA

Emerging Researcher Presentations

- 13:00** **Universal Nanoscale Thermoelectric Power Generator for Energy Harvesting Applications**
Faisal Alamri, King Abdulaziz City for Science and Technology (KACST), Saudi Arabia
- 13:15** **Preparation of Graphene Nanoparticle Surface Modified Metal Oxide Doped Soda-Lime Glass Composite for Application in Water Purification**
Aban Mandal, Jadavpur University, India
- 13:30** **The Developing Natural Convection Visualization of Water - Ethylene Glycol Mixture based Fe₃O₄ Nanofluids in Eccentric Annular Ducts in Low Temperature Applications**
Nur Cobanoglu, Izmir Katip Celebi University, Turkey
- 13:45** **A Novel Nanocomposite Coating for Flexible Food Packaging – The Effect of Dispersion Preparation and Coating Processes on the Final Oxygen Barrier Performance**
Stefan Schiessl, Fraunhofer Institute for Process Engineering and Packaging (IVV), Germany
- 14:00** **Influence of Engineered Nanoparticles on Properties of Water in Soil Organic Matter**
Marta Miklasova, Brno University of Technology, Czech Republic
- 14:15** **A Study of Solvent Systems for Nickel Nanopastes Used for Nanojoining**
Benjamin Sattler, Chemnitz University of Technology, Germany

E-Posters

- 14:30** **Characterization of Titanium Dioxide for Nanoparticles**
Weam Sidahmed Awadalla Sidahmed, University of Khartoum, Sudan