

9<sup>th</sup> **In-person and Online**  
**NANOTECH & NANOMATERIALS**  
Research Conference

JUNE 12-14, ROME, ITALY | ONLINE, ZOOM

EXHIBITOR

**Genizer**

SOLUTION FOR NANO

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nanomaterials  
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**Monday**  
June 12, 2023

# TENTATIVE PROGRAM

# Day 1

08:30

AV Check

08:40

Opening Remarks and Introduction

## Plenary Talk (40+5 Minutes)

08:45-09:30

**Small is Big: Magic Nano Droplets**

**Liqui Wang**, The Hong Kong Polytechnic University, Hong Kong

## Nano in Life Sciences, Medicine and Healthcare

### Keynote Talk (35+5 Minutes)

09:30-10:10

**Free-standing Polymer Thin Films for Loading of Drugs or Stem Cells as Immobilizable Devices**

**Shinji Takeoka**, Waseda University, Japan

10:10-10:25

Coffee Break

### Featured Talks (Each Talk 15+5 Minutes)

#### Session: Cancer Nanotherapeutics

10:25-10:45

**Local Reprogramming of Tumor-associated Macrophages with Nano-in-Cryogel Biomaterials**

**Todd D Giorgio**, Vanderbilt University, USA

10:45-11:05

**Magnetic-actuated 'Capillary Container' for Versatile Three-dimensional Fluid Interface Manipulation**

**Yiyuan Zhang**, The University of Hong Kong, Hong Kong

11:05-11:25

**Poly(glycerol)-based Biomedical Nanodevices Constructed by Functional Programming on Inorganic Nanoparticles for Cancer Nanomedicine**

**Naoki Komatsu**, Kyoto University, Japan

11:25-11:45

**Dually Targeted Brain and GBM Specific Nanomedicines**

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

## **Session: Nanotech. in Medicine and Healthcare**

**11:45-12:05** **Chitosan Covalently Functionalized with Peptides Mapped on Vitronectin and BMP-2 for Bone Tissue Engineering**  
**Annj Zamuner**, University of Padova, Italy

**12:05-12:25** **3D Printed Nanocomposite Contact Lenses**  
**Haider Butt**, Khalifa University, United Arab Emirates

**12:25-12:45** **Hydrophilic Nanostructures in Nanomedicine and Biotechnology: The Role of Surface and Interface Properties for Efficient Bioactivity**  
**Sara Cerra**, Sapienza University of Rome, Italy

**12:45-13:05** **How Ultra-short Lasers Help Creating Hierarchical Reliefs Efficiently Guiding Cells on Nanostructured Patterns**  
**Tatiana Itina**, Jean Monnet University, France

**13:05-13:50** **Lunch Break**

## **Session: Nano-enabled Biomarkers, Drug Delivery, Diagnostics and Therapeutics**

**13:50-14:10** **Cyclodextrins in Drug Delivery: An Updated Overview**  
**Francesca Maestrelli**, University of Florence, Italy

**14:10-14:30** **Magnetic Nanoparticle Engineered Red Blood Cells as Novel Theranostic Agents**  
**Riccardo Di Corato**, IMM-CNR, Italy

**14:30-14:50** **Bio-templated Nanomaterials for Sensing, Imaging and Therapeutic Applications**  
**Yen Nee Tan**, Newcastle University, UK and Singapore

**14:50-15:10** **Camouflaged Nanocarriers for Targeted Drug Delivery**  
**Anna M. Piras**, University of Pisa, Italy

**15:10-15:30** **Polysaccharide Nanohydrogels and Drug Delivery: An Effective Combination**  
**Pietro Matricardi**, Sapienza University of Rome, Italy

**15:30-15:50** **Fluorescent and Magnetic Mn, Gd or Fe-doped Ag-In-Zn-S QDs: Aqueous Synthesis and Characterization**  
**Galiyeva Perizat**, Al-Farabi Kazakh National University, Kazakhstan

**15:50-16:10** **Production of Foams for Drug Delivery**  
**Paolo Trucillo**, University of Naples Federico II, Italy

**16:10-16:25** **Coffee Break**

**16:25-16:45** **A Portable Paper-based Viscometer for Measurement of Plasma Viscosity**  
**Arnab Sarkar & Neha Gautam** Indian Institute of Technology, India

**16:45-17:05** **Analytical Characterization of LNP-RNA Based Therapeutics**  
**Sabrin Gioria**, SJRC-Ispira, Italy

## Session: Nano in Food & Agriculture

17:05-17:25 **High Performance Sustainable Food Packaging: Efficacy of Bio-nanocomposite Coating Systems**  
Nattakan Soykeabkaew, Mae Fah Luang University, Thailand

### Emerging Researcher Talks (Each Talk 10+5 Minutes)

17:25-17:40 **A Novel Approach to Control *Botrytis cinerea* Fungal Infections: Uptake and Biological Activity of Antifungals Encapsulated in Nanoparticle-based Vectors**  
Camilla Badiali, Sapienza University of Rome, Italy

17:40-17:55 **Ultra-small Non-magnetic Iron Oxide Nanoparticles: Uptake and DNA Damage Response *In Vitro* and *In Vivo***  
Alonso Rodríguez Pescador, University of Oviedo, Spain

17:55-18:30 **Poster Presentations**

18:30  
Onwards **Social Event and Networking**

### Poster Presentation List

- P1 **Bioapplications of Electrospayed Coatings Based on Chitosan, Bioglass and Zinc Oxide on Ti-Zr-Ta-Ag**  
Andrei Bogdan Stoian, Politehnica University of Bucharest, Romania
- P2 **Upconversion Nanoparticles as Multimodal Nanomarkers for Non-invasive Bioimaging, Monitoring and Tissue Engineering**  
Ekaterina Trifanova, Institute of Photon Technologies, Russia
- P3 **The Efficiency of Silver Iodide Nanoparticle as a Novel Suppression Agent for Grown, Migrated, and Invasive Papillary Thyroid Cancer Cells**  
Saeed, Mustansiriyah University, Iraq
- P4 **Core-shell DNA-cholesterol Nanoparticles Exert Lysosomolytic Activity in African Trypanosomes**  
Wolf-Matthias Leeder, Technical University of Darmstadt, The Netherlands
- P5 **Eight-channel Integrated Device for Electro-optic Modulation and Dense Wavelength Division Multiplexing Based on Photonic Crystal**  
Wanle Pan, Nanjing University of Posts and Telecommunications, China
- P6 **Simulation and Fabrication of Nanostructured Device for Image Enhancement of fNIRS System**  
Jun Hyun Kim, Pusan National University, South Korea
- P7 **The Influence of pH and Molar Ratio in Wet Chemical Synthesis of Hydrothermally Obtained MoS<sub>2</sub>**  
Hani El-Naggar, Babes-Bolyai University, Romania
- P8 **Morpho-structural and Electrical Characteristics of Hydrothermally Synthesized MoS<sub>2</sub> Using Various Precursor Combinations**  
Catalin Alexandru Salagean, Babes-Bolyai University, Romania

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- P9** **Multifunctional Nano-coatings by MAPLE Deposition on Titanium Alloy for Bio-applications**  
**Marius Enachescu**, Politehnica University of Bucharest, Romania
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- P10** **Nanocoatings Prepared by MAPLE Deposition Based on Chitosan (Ch), Bioactive Glass (BG), Titanium Dioxide (TiO<sub>2</sub>) and Zinc Oxide Nanoparticles (ZnO)**  
**Mariana Prodana**, Politehnica University of Bucharest, Romania
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- P11** **Fire Resistant and Thermal Insulator Monolithic Cellulosic Materials Obtained from Wood Sawdust Waste**  
**Cotet Cosmin**, Babes-Bolyai University, Romania
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- P12** **Structural Characterization and Flame Retardancy Properties Evaluation of GO-functionalized Based Composites**  
**Monica Baia**, Babes-Bolyai University, Romania
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- P13** **ZnO NR/Au NP Nanocomposites for Antibacterial Applications**  
**Violeta Dediu**, IMT Bucharest, Romania
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- P14** **Non-invasive and Selective Neuromodulation of Deeper Structures in the CNS**  
**Angelo Homayoun ALL**, Hong Kong Baptist University, Hong Kong
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- P15** **The PDZ Motif Peptide of ZO-1 Attenuates *Pseudomonas aeruginosa* LPS-induced Airway Inflammation**  
**Hyun-Chae Lee & Kyoung Seob Song**, Kosin University College of Medicine, South Korea
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- P16** **Donepezil-loaded Liposomes as Innovative Strategy to Overcome P-gp Dependent Resistance in Neurodegeneration**  
**Lucia Vizzoni**, University of Siena, Italy
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- P17** **Numerical Study of Early Oxidation Effect on Wettability of Laser-treated Surface**  
**Omeje Ilemona Sunday**, Jean Monnet University, France
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- P18** **Multifunction Optoelectronic Fiber Device by Integrating Graphene/MoS<sub>2</sub> Heterostructures**  
**Zhe Chen**, Ji Hua Laboratory, China
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**Tuesday**  
June 13, 2023

**Day 2**

08:20

AV Check

08:35

Day 2 Opening Remarks

**Plenary Talk (40+5 Minutes)**

08:40-09:25

**Future Directions of Materials**

**Seeram Ramakrishna**, National University of Singapore, Singapore

**Nanotechnology in Energy and Environment Sustainability**

**Keynote Talk (35+5 Minutes)**

09:25-10:05

**Nanostructured Interfacial Energy Materials for Sustainable Photovoltaics and Solid-state Lithium Batteries**

**George P. Demopoulos**, McGill University, Canada

10:05-10:20

Coffee Break

**Featured Talks (Each Talk 15+5 Minutes)**

10:20-10:40

**Activation of the Micron-Aluminum-water System Using Aluminum Nanoparticles for the Steady Generation of Hydrogen**

**Paul Jelliss**, Saint Louis University, USA

10:40-11:00

**Janus Organic Semiconductor Nanoparticles Prepared by Simple nanoprecipitation for Organic Photovoltaics**

**Christine Lartigau-Dagron**, University of Pau and the Adour Region, France

11:00-11:20

**Nanocomposite Based on “Silicon Nanowires-conducting Polymer” for Flexible an Ultra-stable All Solid Supercacitor**

**Sadki Said**, IRIG-SyMMES, France

11:20-11:40

**Water Disinfection and Pathogens Detection via Thermoplasmonic Responsive and Bioactivated Gold Nanorods Array**

**Luciano De Sio**, Sapienza University of Rome, Italy

11:40-12:00

**Sustainable Synthesis of Coconut Shell-based Magnetic Activated Carbon: Application on the Removal of Contaminants from Wastewater**

**Doga Kavaz**, Cyprus International University, North Cyprus

12:00-12:20

**Graphene-based Technologies by Solution Processing: Advances and Applications**

**Andrea Capasso**, INL, Portugal

**Emerging Researcher Talks (Each Talk 10+5 Minutes)**

12:20-12:35

**Green Synthesis of Ni Doped ZnO Nanoparticles Using Dandelion Leaf Extract and its Solar Cell Applications**

**Shelan Mohammed Mustafa**, Erbil Polytechnic University, Iraq

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**12:35-12:50** **Efficient Power Density Amelioration Strategy for Capacitive Salinity-gradient and pH-gradient Energy Harvesting Systems**  
**Nan Wu**, PSL University, France

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**12:50-13:05** **Hybrid Heterostructure Nanocomposite of Carbon Nanofibers in Hollow Sheet-like Tin Sulfide Nanotubes for Ultrafast Lithium Storage**  
**Ki-Wook Sung**, Seoul National University of Science and Technology, South Korea

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**13:05-13:50** **Lunch Break**

**Nanomaterials: Characterization, Methodologies and Research Advancements**

**Keynote Talk (35+5 Minutes)**

**13:50-14:30** **Metalloid Group 11 Clusters: Novel Structures and Applications**  
**Andreas Schnepf**, University of Tübingen, Germany

**Featured Talks (Each Talk 15+5 Minutes)**

**14:30-14:50** **Interlocking of Single-walled Carbon Nanotubes with Metal-tethered Tetragonal Nanobrackets to Enrich a Few Hundredths of Nanometer Range in Their Diameters**  
**Naoki Komatsu**, Kyoto University, Japan

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**14:50-15:10** **Self-organization and Aggregation-induced Emission Behaviors of Coordinated Gold Nanoclusters**  
**Katsuaki Konishi**, Hokkaido University, Japan

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**15:10-15:30** **Insights into Carbon Xerogel Composites with Bi and Fe Nanoparticles for the Development of Efficient Electrochemical Sensors**  
**Lucian Baia**, Babes-Bolyai University, Romania

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**15:30-15:50** **Nano-spectroscopic Studies of Chemical Evolution**  
**Masahiko Hara**, Tokyo Institute of Technology, Japan

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**15:50-16:10** **Low-cost CNT Synthesis with Rough Vacuum and Cold Walled CVD Reactor**  
**Onur Ozan Cilsal**, Uludag University, Turkey

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**16:10-16:30** **Photocatalytic Activity of M-ZnO Doped (M = Co, Cr, Fe, Mn y Ni)**  
**Ovidio Almanza Montero**, Universidad Nacional de Colombia, Colombia

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**16:30-16:45** **Coffee Break**

**16:45-17:05** **Precise Design and Synthesis of 2D Polymers Including Hetero Atoms**  
**Michio Matsumoto**, National Institute for Materials Science, Japan

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**17:05-17:25** **Electrically Switchable Intervalley Excitons with Strong Two-phonon Scattering in Bilayer WSe<sub>2</sub>**  
**Mashaal M. Altairy**, University of Jeddah, Saudi Arabia

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**17:25-17:45** **Short Oligomeric Molecules Demonstrate Behavior of Bistable Machines**  
**Alexander Muratov**, Russian Academy of Sciences, Russian Federation

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**17:45-18:05** **Photoluminescence Study of YVO<sub>4</sub>:Eu Nanoparticles Dispersed on Glass Slides**  
**Eya Hergli**, University of Minho, Portugal

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**18:05-18:25** **Influence of Sustainable Synthesized Nano Silica Enhanced with Plastic Waste, on the Mechanical Properties of Concrete: A Comparative Study on Varying Temperatures**  
**Evidence Akhayere**, Cyprus International University, North Cyprus

**Emerging Researcher Talk (10+5 Minutes)**

**18:25-18:40** **Formation of Orthorhombic MAB Phase (Mo<sub>1-x</sub>Cr<sub>x</sub>AlB) Solid Solution Thin Films**  
**Peter Pollmann**, RWTH Aachen University, Germany

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**18:40-18:55** **3D Printed Carbon Nanotube Applications**  
**Brendan Wolan**, University of Illinois at Urbana Champaign, United States

Wednesday  
June 14, 2023

**Day 3**

08:20

AV Check

08:35

Day 3 Opening Remarks

Nano Electronics  
Societal Aspects

**Keynote Talks (Each Talk 35+5 Minutes)**

**08:40-09:20** **Quantum Defects in Semiconducting Carbon**  
**YuHuang Wang**, University of Maryland, USA

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**09:20-10:00** **Large-scale and Integrated Metasurfaces for Active and Passive Light Modulation**  
**Xingjie Ni**, The Pennsylvania State University, USA

10:00-10:15

Coffee Break

**Featured Talks (Each Talk 15+5 Minutes)**

**10:15-10:35** **Non-adiabatic Quantum Dynamics of Tribovoltaic Effects at Sliding Metal-semiconductor Interfaces**  
**Wenjie Dou**, Westlake University, China

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**10:35-10:55** **CO-integrated Selective Multi-elements Organic Sensors: Towards Multi-selective Detection of Complex Gas Mixtures Using E-Nose**  
**Bilel HAFSI**, Institute of Electronics, Microelectronics and Nanotechnology (IEMN), France

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**10:55-11:15** **Origin and Control of Molecular Orientation of Phosphorescent Dyes for Efficient and Stable Blue OLEDs**  
**Jang-Joo Kim**, Seoul National University, South Korea

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**11:15-11:35** **Acceleration of Interfacial Electrical Conductivity of Carbon-nanotube-filled Electrically Conductive Pastes by Binder Chemistry Control**  
**Masahiro Inoue**, Gunma University, Japan

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**11:35-11:55** **Electrochemically Fabricated SrGa<sub>2</sub>S<sub>4</sub>:Eu/ZnO-vertical Nanowire Bilayer Scintillator for X-ray Imaging**  
**Pei Loon Khoo**, Toyohashi University of Technology, Japan

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**11:55-12:15** **The Ethical Concern about Nanotechnology**  
**Fernand Doridot**, ICAM of Lille, France

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**12:15-12:35** **Halloysite Clay Nanotubes for Restoration of Cultural Heritage**  
**Giuseppe Cavallaro**, University of Palermo, Italy

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### Emerging Researcher Talk (10+5 Minutes)

**12:35-12:50** **Reduction of the Resistance to the Advance / Growth of Lichens and Mosses in Lithic Elements used in the Construction of Facades of Cusco Heritage Churches by Applying Air Nanobubbles.**  
**Danna Gabriela Rodriguez Salas**, Universidad Andina Del Cusco, Peru

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**12:50**  
**Onwards**

**Lunch Break**

## Virtual Sessions-Zoom

### Session 1

#### Featured Talks (Each Talk 15+5 Minutes)

**13:20-13:40** **Effect of Concentric Modes Formed by Nanograting Structured Ring Resonator on Biosensing Sensitivity**  
**Anh Igarashi**, Tohoku University, Japan

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**13:40-14:00** **Urea Conversion Kinetics via Enzymes Immobilized on Microparticles**  
**Jin-Won Park**, Seoul National University of Science and Technology, South Korea

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**14:00-14:20** **Advanced ZnO Based Piezo-phototronic Optoelectronics**  
**Wenbo Peng**, Xi'an Jiaotong University, China

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**14:20-14:40** **Synthesis of Patchouli Biomass Based Carbon Nanomaterial Using Two Different Double Pyrolysis Methods**  
**Tutik Setianingsih**, Brawijaya University, Indonesia

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**14:40-15:00** **Au NPs/L-Cys/MWCNTs Modified Immunochip for the Detection of BaP**  
**Qiu Chengjun**, Beibu Gulf University, China

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**15:00-15:20** **Foam-surfactant Template Synthesis of Nanomaterials for Boosting the Electrochemical Energy Reactions**  
**Mohamed Ali Ghanem**, King Saud University, Saudi Arabia



## Emerging Researcher Talk (10+5 Minutes)

- 15:20-15:35** **Comparative Analysis of Properties of Coagulation-processed Nanocomposites: Polypropylene and Polyamide-6**  
**Zaib un Nisa**, Petronas University of Technology, Malaysia

## E-Posters (7+3 Minutes)

- 15:35-15:45** **Zn-MOF Vaccine Controlled Release of Zinc Ions to Enhance Antitumor Immunotherapy**  
**Lin Ding**, Southern University of Science and Technology, China
- 15:45-15:55** **Functional Nanocomposites and Their Potential Applications**  
**Haleema Khanzada**, Kaunas University of Technology, Lithuania
- 15:55-16:05** **Thermal Conductivity of Screen-printed and Spray-coated Cotton Fabrics Coated with Phase-change Material**  
**Gurumurthy Ramaiah**, Ethiopian Technical University, Ethiopia

**16:05-16:15**

**Break**

## Session 2

### Keynote Talk (35+5 Minutes)

- 16:15-16:55** **Advanced Concepts for Ultra-high Conversion Efficiency of Solar Photons into Photovoltaics and Solar Fuels Based on Quantization Effects in Nanostructures and Molecular Singlet Fission**  
**Arthur Nozik**, University of Colorado, USA

### Featured Talks (Each Talk 15+5 Minutes)

- 16:55-17:15** **Application of Polymeric Nanocomposites in the Oil Industry: EVA: Clay Minerals Nanocomposites as Flow Assurance Improvers**  
**Bruna Frugoli Alves**, Federal University of Rio de Janeiro, Brazil
- 17:15-17:35** **Modeling of Nanomaterial Transportation within an Enclosure with Imposing External Magnetic Source**  
**Hamdi AYED**, King Khalid University, Saudi Arabia
- 17:35-17:55** **Post-acceleration of Electron Bunches from Laser-irradiated Nano Clusters**  
**Laura Di Lucchio**, Free University of Bozen-Bolzano, Italy
- 17:55-18:15** **Synthesis of Nanoparticles of YVO<sub>4</sub>:Eu**  
**Stanislav Ferdov**, University of Minho, Portugal
- 18:15-18:35** **Au NanoDyes as Contrast Agents for Enhanced Wide Field Near Infrared Fluorescence Lifetime Imaging**  
**Rinat Ankri**, Ariel University, Israel
- 18:35-18:55** **Green Synthesis of Silver Nanoparticles Using Natural Precursors and Their Application in Antimicrobial Activities**  
**Youssef Mir**, Ibn Zohr University, Morocco

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**18:55-19:15** **Non-functionalized Gold Nanoparticles Inhibit Human Papillomavirus (HPV) Infection**  
**Giovanni Palomino-Vizcaino**, University of Baja California, Mexico

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**19:15-19:35** **Nanomedicine: Cytotoxicity of Gold Nanoparticles**  
**Ana Pejovic-Milic**, Toronto Metropolitan University, Canada

**E-Poster (7+3 Minutes)**

**19:35-19:45** **Comparative Evaluation of Standard Quercetin versus Nanoparticles Formulation on Kidney Fibrosis**  
**Adriana Maria Salazar Montes**, University of Guadalajara, Mexico

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*\*PLEASE NOTE THIS SCHEDULE IS TENTATIVE AND SUBJECT TO CHANGE\**

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