



**Theme:**

Outlining the forefront research in the field of materials science and nanotechnology.

**SCIENTIF**ink

2<sup>nd</sup> Global Conference on

# Materials Science & Engineering

**MAY 30-31** | **DUBAI**  
**2024** | **UAE**

*Materials World 2024*

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# SCIENTIFIC AGENDA

MAY 30-31, 2024

Name	Affiliation	Title
Introduction & Open Ceremony		
Speaker Presentations		
Seongwoo Woo	<i>Ethiopian Technical University, Ethiopia</i>	Improving the Fatigue Design of Mechanical Systems such as Refrigerator
Z Kovziridze	<i>Georgian Technical University Georgia</i>	FAILURE STRESS ENERGY FORMULA
Raul B. Rebak	<i>GE Vernova Research USA</i>	Using Advanced Fuel Materials to Retrofit Current Light Water Reactors
Raman Singh	<i>Monash University, Australia</i>	Innovative Surface Modification for Enabling CVD Graphene Coating on Steels for Remarkable Corrosion Resistance
K. U. Neumann	<i>SRH University of Applied Sciences, Germany</i>	Martensitic Domain Formation in the Ferromagnetic Shape Memory Material Ni <sub>2</sub> MnGa
Osman Adiguzel	<i>Firat University, Turkey</i>	Shape Reversibility and Fundamental Characterization of Shape Memory Alloys
David Sheehan	<i>Khalifa University, Ubu Dhabi, UAE</i>	Nanoparticles as novel nucleation agents in protein crystallization: Success with a panel of unrelated proteins
Refreshment and Coffee Break		
Speaker Presentations Continues...		
Carlos Guerrero-Fajardo	<i>Universidad Nacional de Colombia</i>	sdComparison of performance in obtaining graphene oxide in three particle sizes using the Liquid Phase Exfoliation (LPE) method with high-rank Colombian coal

<b>Pitamber Mahanandia</b>	<i>National Institute of Technology, Rourkela, Odisha, INDIA</i>	<b>Investigation of mobility of graphene based field-effect transistor using ferroelectric gate</b>
<b>UTHAYAKUMAR G S</b>	<i>St. Joseph's Institute of Technology, Chennai, India</i>	<b>Artificial intelligence, IoT, and growing semiconductor technologies</b>
<b>Lev Rapoport</b>	<i>Holon Institute of Technology, Israel</i>	<b>The effect of the microstructure on the Friction and Wear Properties of Some FCC Metals under Lubricated Conditions</b>
<b>Carolina Fonseca de Farias</b>	<i>Federal University of Juiz de Fora, Brazil</i>	<b>The high-performance mortar with incorporation of marble waste and different additives</b>
<b>Urvashi Gunpath</b>	<i>University of Derby, United Kingdom</i>	<b>Laser-based material Science behind Powder Based Additive Manufacturing for Aerospace and Healthcare Industry</b>
<b>Rodolfo Gabriel Figueroa Saavea</b>	<i>Universidad de La Frontera, Chile</i>	<b>A New Tool for Cancer Theragnosis</b>
<b>Karima BELAKROUM</b>	<i>University of El Oued, Algeria</i>	<b>Structural and magnetic properties evolution of <math>Cu_{2x}Cr_{2x}Zr_{2-2x}Se_4</math> for <math>0.500 \leq x \leq 0.650</math></b>
<b>Hansang Cho</b>	<i>Sungkyunkwan University, Republic of Korea</i>	<b>Astrocytic Scar Restricting Glioblastoma Spreading in Glioblastoma-Microglia Assembloid</b>
<b>khaled Shawakfeh</b>	<i>Jordan University of Science and Technology, Jordan</i>	<b>Encapsulation of Digitonin-Graphene Oxide, Digitonin-Graphene-Iron Oxide Composite into Cyclodextrins</b>
<b>Ilham El-Monier</b>	<i>Cairo University, Egypt</i>	<b>Doxorubicin and RITA loaded pH-responsive Dextran nanoparticles exhibiting inhibitory effects in synergism against cancer cells</b>
<b>Pier Paolo Pompa</b>	<i>Istituto Italiano di Tecnologia, Genova, Italy</i>	<b>Point-of-care colorimetric nanobiosensors: health, safety, food, environment</b>
<b>Bhawana Jain</b>	<i>Siddhachalam Laboratory, Raipur (C.G.) INDIA</i>	<b>Antibacterial and photocatalytic degradation via ZnO-<math>\beta</math>-cyclodextrin nanocomposite</b>

## Refreshment and Coffee Break

<b>Umesh Yadava</b>	<i>Deen Dayal Upadhyaya Gorakhpur University, India</i>	<b>Solute Binding Proteins as Smart Biomolecules: Structural and Functional Characterizations</b>
<b>Abdelhak Maghchiche</b>	<i>University Batna 2, Algeria</i>	<b>Nano composite hydrogels for biomedical applications from palm date seeds</b>
<b>Khatib Zada Farhan</b>	<i>King Abdulaziz University, Saudi Arabia</i>	<b>Influence of steel, polypropylene and glass fiber reinforcement on the high temperature resistance of alkali activated composites</b>
<b>Haroldo A Ponte</b>	<i>Federal University of Paraná, Brazil</i>	<b>Surface application of yttrium oxide nanoparticles as a protective method against high temperature oxidation to increase material's lifespan</b>
<b>V A Krylov</b>	<i>Institute of the Chemistry of High Purity Substances of the Russian Academy of Sciences, Russia</i>	<b>Gas chromatographic and gas chromatographic-mass spectrometric analysis of high purity volatile compounds for electronics and fiber optics</b>
<b>George Venedictovich Filatov</b>	<i>Ukrainian State University of Chemical Technology, Ukraine</i>	<b>The problem of durability of Structures under their Hydrogenation</b>
<b>Ang-yang Yu</b>	<i>Harbin Engineering University, China</i>	<b>Numerical simulation of seismic wave field in the two-phase viscoelastic EDA media</b>
<b>Eugenia Pechkova</b>	<i>University of Genova, Italy</i>	<b>Protein Langmuir-Blodgett (LB) nanofilms: characterization and applications</b>
<b>Santanu Ghosh</b>	<i>Metal-insulator nanocomposite films for Field emission, Magnetic storage and LSPR for electronics and fiber optics</i>	<b>IIT DELHI, New Delhi-110016, India</b>
<b>Thomas J Webster</b>	<i>Interstellar Therapeutics, USA</i>	<b>The BandAid: Human Data of Artificial Intelligence (AI) for Improved Biomaterial Design and Use</b>

## Refreshment and Coffee Break

<b>Prof. Brij Bhushan Tewari</b>	<i>University of Guyana, Guyana</i>	<b>An Alternate Productive Solution To The Disposal Of Carbon Dust Obtained From Industries</b>
<b>Priya V</b>	<i>Visvesvaraya Institute of Technology, India</i>	<b>An Alternate Productive Solution To The Disposal Of Carbon Dust Obtained From Industries</b>
<b>Vladimir G Plekhanov</b>	<i>Fonoriton Science Lab. Estonia</i>	<b>Isotope-based New Materials</b>
<b>Dr Nuzhat Ahsan</b>	<i>Quant Lase Lab LLC, Abu Dhabi, UAE</i>	<b>Advancements in QCM-Based Biosensors: Integrating Biomaterials and Polymeric Coatings for Enhanced Disease Biomarker Detection</b>
<b>Dr Reshmi Raj</b>	<i>Quant Lase Lab LLC, Abu Dhabi, UAE</i>	<b>Bridging Strength and Sensitivity: Biomaterial Innovation in Abdominal Hernia Repair with Extracellular Matrix Hydrogel Coated Polypropylene Mesh</b>
<b>MIKHAIL BELKIN</b>	<i>Russian Technological University, Moscow</i>	<b>Jamming unauthorized radio channels with ultrafast response time</b>
<b>Refreshment and Coffee Break</b>		
<b>Eugene Stephane Mananga</b>	<i>The City University of New York, USA</i>	<b>NWChemEx Science Challenge Calculations to Investigate the dehydration of 2- propanol reaction</b>
<b>Harrison Corrãa</b>	<i>Universidade Federal do Paraná, Brazil</i>	<b>Nanopolymers - the new frontier for material development</b>
<b>Jun ZOU</b>	<i>The Chinese University of Hong Kong, Hong Kong</i>	<b>Direct sampling methods for nonlinear ill-posed inverse problems</b>
<b>WENBO PENG</b>	<i>Xi'an Jiaotong University, China</i>	<b>Piezo-Phototronic Effect in Multi-Layer Structured Optoelectronic: Bilateral Piezoelectric Charge Modulation</b>
<b>Emmanuel Ifeanyi Ugwu</b>	<i>Nigerian Army University</i>	<b>Synthesis and the study of optical and solid state properties of nickel sulphide doped with aluminum</b>

<b>Nina Ivanova</b>	<i>Insitute of Dermatology and Venereology of Academy of National Medical Science of Ukraine, Ukraine</i>	<b>The Treatment Alzheimer's Disease by the Lipochrom</b>
<b>Stoyan Sarg Sargoytchev</b>	<i>Institute of Space, Matter, and Energy Fields, Bulgaria</i>	<b>Atlas of Atomic Nuclear Structures - a major contribution of the BSM - Supergravitation Unified Theory</b>
<b>Omolola Esther Fayemi</b>	<i>West University, Mafikeng, South Africa</i>	<b>Electrochemical detection of dopamine using green and chemical synthesized CuO/PANI nanocomposite-modified electrode</b>
<b>Benrezkallah Djamil</b>	<i>Djillali Liabes University, Algeria</i>	<b>Molecular dynamics simulations of unfolding of a thermostable protein: Aeropyrum pernix L7Ae</b>
<b>Refreshment and Coffee Break</b>		
<b>Roman Perez</b>	<i>Universitat Internacional de Catalunya, Spain</i>	<b>fabrication of functional blood vessels in vitro for tissue replacement and drug screening</b>
<b>Mami Iwasaki</b>	<i>University of Toyama, Japan</i>	<b>Metal Complexes in Biology and Medicine: The System Cadmium(II) / Iron(II) / Zinc(II) – <math>\alpha</math>- Aminobutenoic Acid</b>
<b>Sharafat Ali</b>	<i>Linnaeus University, Sweden</i>	<b>The Role of Glass Materials in a Sustainable Energy Future</b>
<b>Kenji Uchino</b>	<i>The Penn State Univ., University Park, PA 16802, USA</i>	<b>Misconceptions in Piezoelectric Energy Harvesting System Development</b>
<b>Fakhraddin Pasha Abasov</b>	<i>Azerbaijan State Marine Academy, Azerbaijan</i>	<b>Effect of gamma radiation on the amount of hydrogen in thin films on silicon for solar cells</b>
<b>Gregory M. Odegard</b>	<i>Michigan Technological University, USA</i>	<b>Process Modelling of Composites using a Multiscale Framework</b>
<b>Ranjit Ray</b>	<i>Saint Louis University, Missouri</i>	<b>Hepatitis C Virus Vaccine Candidate Using mRNA-LNP Platform</b>
<b>Refreshment and Coffee Break</b>		

<b>R. Sivarethinamohan</b>	<i>Imperial College London</i>	<b>Graphene industrial application towards decarbonization</b>
<b>Shaolin Hu</b>	<i>Guangdong University of Petrochemical Technology, China</i>	<b>Outlier-tolerant Learning for Statistical Features from Sampled Signals</b>
<b>Philippe Legros</b>	<i>University of Bordeaux, France</i>	<b>CaCO<sub>3</sub> from Oyster Shell for Potential Application in Bone Tissue Engineering</b>
<b>Fouzia Achchaq</b>	<i>University of Bordeaux, France</i>	<b>Carbon nanotubes implementation in lead acid batteries industrial production</b>
<b>Siarhei Zhdanok</b>	<i>ART MONBAT, Bulgaria</i>	<b>Carbon nanotubes implementation in lead acid batteries industrial production</b>
<b>Yan Song</b>	<i>Chinese Academy of Sciences, China</i>	<b>Preparation and Application of Pitch-based Functional Carbon Materials</b>
<b>Hamid Mehrabi</b>	<i>University of Sunderland, UK</i>	<b>Comparative analysis of additively manufactured primary, recycled and toughened polylactic acid</b>
<b>Zhongwei Guan</b>	<i>Technology Innovation Institute, Abu Dhabi, UAE</i>	<b>Advanced Materials Research Centre of Technology Innovation Institute Abu Dhabi, UAE</b>
<b>Uzma Azeem Awan</b>	<i>National University of Medical Sciences (NUMS), Rawalpindi, Pakistan</i>	<b>Gold Nanoparticle Mediated Optical Control Efficient Gene Knock Down in Hepatocellular Carcinoma</b>
<b>Muhammad Naeem</b>	<i>National University of Medical Sciences, Rawalpindi, Punjab, Pakistan</i>	<b>Preparation and Physicochemical Characterization of NanoCSA for Ulcerative Colitis Therapy</b>
<b>Sutapa Ghosh</b>	<i>CSIR-Indian Institute of Chemical Technology, Hyderabad, Telangana, India</i>	<b>Harnessing the electro-activity of Graphene based materials for Neuritogenesis and Energy storage</b>



<b>Fatma SAAD SAOUD</b>	<i>University of Mhamed El Bachir El Ibrahimi, Bordj Bou Arreridj, ALGERIA</i>	<b>Study of structural, electronic and optical properties for carbon nanotubes using DFT theory</b>
<b>Carlos Alberto Rios Reyes</b>	<i>Universidad Industrial de Santander, Colombia</i>	<b>Discovering the Zeolitic Potential of Natural Clinker: Redefining Coal By-Product Recycling for Sustainable Innovation</b>
<b>Na Yan</b>	<i>Northwestern Polytechnical University, China</i>	<b>First-principles assisted the design of high entropy thermoelectric materials based on half-heusler alloys</b>
<b>Xiangyan Zhu</b>	<i>Shanghai Jiao Tong University, China</i>	<b>Investigating zirconium flows and stocks in China: A dynamic material flow analysis</b>
<b>Stefania Sabella</b>	<i>Italian Institute of Technology, Genova, Italy</i>	<b>Human relevant cellular, analytical and decisional tools to predict the risk of novel substances (nanofoods, occupational contaminants) and their implications to streamline the regulatory classification of emerging toxicants</b>
<b>Nana Gorgaslidze</b>	<i>Tbilisi State Medical University, Tbilisi, Georgia</i>	<b>Modern pharmacy, pharmacology, risks and challenges</b>
<b>"Luiza Gabunia"</b>	<i>Tbilisi State Medical University, Tbilisi, Georgia</i>	<b>Modern pharmacy, pharmacology, risks and challenges</b>
<b>Levan Ratiani</b>	<i>Tbilisi State Medical University, Tbilisi, Georgia</i>	<b>Modern pharmacy, pharmacology, risks and challenges</b>
<b>Nino Pruidze-Liparteliani</b>	<i>Tbilisi State Medical University, Tbilisi, Georgia</i>	<b>Modern pharmacy, pharmacology, risks and challenges</b>
<b>Gvantsa Janigashvili</b>	<i>Tbilisi State Medical University, Tbilisi, Georgia</i>	<b>Modern pharmacy, pharmacology, risks and challenges</b>
<b>Giorgi Varazi</b>	<i>Tbilisi State Medical University, Tbilisi, Georgia</i>	<b>Modern pharmacy, pharmacology, risks and challenges</b>



<b>You Qiang</b>	<i>University of Idaho, USA</i>	<b>Nano-Watermelon: Synthesis, Nanostructures, Nanomagnetism and Applications</b>
<b>NINI ROSE MATHEWS</b>	<i>Instituto de Energias Renovables -UNAM, México</i>	<b>Cu-Sb chalcogenide thin films by electrodeposition and the photoelectrochemical hydrogen evolution</b>
<b>Ghulam Rasool</b>	<i>Beijing University of Technology, China</i>	<b>"Rheology of Phase Change Materials and their Applications in Energy Storage</b>
<b>MIKHAIL BELKIN</b>	<i>Russian Technological University, Moscow</i>	<b>Jamming unauthorized radio channels with ultrafast response time</b>
<b>Vladimir Levchenko</b>	<i>International Joint Institute of Advanced, China</i>	<b>Effect of Artificial Intelligence on Obtaining Coatings and Materials with Specified Properties</b>
<b>V A Krylov</b>	<i>Institute of the Chemistry of High Purity Substances of the Russian Academy of Sciences, Russia</i>	<b>Gas chromatographic and gas chromatographic-mass spectrometric analysis of high purity volatile compounds for electronics and fiber optics</b>
<b>George Venedictovich Filatov</b>	<i>Ukrainian State University of Chemical Technology, Ukraine</i>	<b>The problem of durability of Structures under their Hydrogenation</b>
<b>Ang-yang Yu</b>	<i>Harbin Engineering University, China</i>	<b>Harbin Engineering University, China</b>
<b>Eugenia Pechkova</b>	<i>University of Genova, Italy</i>	<b>Protein Langmuir-Blodgett (LB) nanofilms: characterization and applications</b>
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<b>Eugene Stephane Mananga</b>	<i>The City University of New York, USA</i>	<b>NWChemEx Science Challenge Calculations to Investigate the dehydration of 2- propanol reaction</b>
<b>Prof Leelakrishna Reddy</b>	<i>University of Johannesburg, South Africa</i>	<b>Exploring the Magnetic and Optical Properties of Dilute Magnetic Semiconductors: Doping and Synthesis Perspectives in Zinc Oxide Materials</b>
<b>*** End of the Conference ***</b>		

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