



Peers Alley Media

1126 59 Ave East, V5X 1Y9, Vancouver BC, Canada

WhatsApp No: +1 (506) 909-0537

# SCIENTIFIC PROGRAM



7th Edition of

# ADVANCED MATERIALS SCIENCE WORLD CONGRESS

March 24-25, 2025 | London, UK

<https://advanced-materialsscience.peersalleyconferences.com/>

# SCIENTIFIC PROGRAM

# DAY 01

MONDAY

MARCH 24, 2025

HALL 01

08:00-08:30

Registrations

08:30-08:40

Inaugural Ceremony

**Moderator**

**Thiago C Canevari**, *Mackenzie Presbyterian University, Brazil*

**Sessions: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis**

## Distinguished Speaker Talks

**Session Chair**

**Weizhong Dai**, *Louisiana Tech University, USA*

**Session Chair**

**José Joaquim Costa Cruz Pinto**, *University of Aveiro (Retd.), Portugal*

08:40-09:00

Title: Learning and Performance in the Age of Artificial Intelligence

**Gary J. Dickelman**, *EPSScentral LLC, USA*

09:00-09:20

Title: Neural Network Method for Solving Parabolic Two-Temperature Micro/Nanoscale Heat Conduction in Thin Films Exposed to Ultrashort-Pulsed Lasers

**Weizhong Dai**, *Louisiana Tech University, USA*

09:20-09:40

Title: New Insights on Molecular Cooperativity in Amorphous Condensed Matter

**José Joaquim Costa Cruz Pinto**, *University of Aveiro (Retd.), Portugal*

09:40-10:00

Title: *In vitro* Assessment of a New Block Design for Implant Crowns with Functional Gradient Fabricated with Resin Composite and Zirconia Insert

**Nicolas Gutierrez**, *Universitat Internacional de Catalunya (UIC), Spain*

---

10:00-10:20 Title: "Double Dovetail Tenon": A New Connector for Multi-Storey Timber Construction  
A Case Study on Fire Protection with this Connection

**Anton Kraler**, *University of Innsbruck, Timber Engineering Unit, Austria*

---

GROUP PHOTO 10:20-10:30

REFRESHMENT BREAK 10:30-10:50

---

10:50-11:10 Title: Solution Conductivity and Solution Layer Thickness as Factors Determining the Rate of the Photocatalytic Reaction Rate

**Emil Ivanov Lilov**, *University of Chemical Technology and Metallurgy, Bulgaria*

---

11:10-11:30 Title: Synergetics Principles of the Regularity of the Development of Microcracks in Elements of the Friction Units

**Ahad Khanahmad Janahmadov**, *Azerbaijan National Academy of Aviation, Azerbaijan*

---

11:30-11:50 Title: Three-Dimensional Elasticity Analysis of Sandwich Cylindrical Shell by Numerical Integration Approach

**Yogesh M. Desai**, *Indian Institute of Technology Bombay, India*

---

11:50-12:10 Title: Copper Oxide Nanostructures with Nanoneedles Shape Obtained by Direct Reaction with Nitrogen-Doped Carbon Quantum Dots: Development of an Electrochemical Sensor to Glyphosate

**Thiago C Canevari**, *Mackenzie Presbyterian University, Brazil*

---

12:10-12:30 Title: Testing Cut-Resistance of Protective Textiles

**Nandan Kumar**, *High Performance Textiles Pvt Ltd., India*

---

12:30-12:50 Title: Influence of Gauges in the Numerical Simulation of the Time-Dependent Ginzburg-Landau Model

**Cyril Tain**, *Laboratoire de Mathématiques de l'INSA Rouen Normandie, Univ Rouen Normandie, CNRS, Normandie Univ, France*

---

GROUP PHOTO 12:50-13:00

LUNCH BREAK 13:00-13:40

---

13:40-14:00 Title: Characterization of Varnish Adhesion on Polyamide Monofibers: An Innovative Approach

**Meriem Benzarti**, *Université de Haute Alsace, France*

---

14:00-14:20	<p>Title: Proof that Minority Current Carriers Produce Superconducting Current in Superconductors</p> <p><b>Yurii Uhryn</b>, <i>Ivan Franko Drohobych State Pedagogical University, Ukraine</i></p>
14:20-14:40	<p>Title: Studies on the Behaviour of Steel Fibre Reinforced Concrete under Monotonic and Repeated Cyclic Stress in Tension</p> <p><b>Suresh G.S.</b>, <i>The National Institute of Engineering (Retd.), India</i></p>
14:40-15:00	<p>Title: Study on Mechanical Properties of Fiber Metal Laminates and its Application in Automobile Body</p> <p><b>Wenbin Hou</b>, <i>Dalian University of Technology, China</i></p>
15:00-15:20	<p>Title: Synthesis of Pure Hydroxyapatite (HA) from Indian Clam Seashells and Deposition of the same by Atmospheric Plasma Spray (APS) Technique on Ti-Alloy Substrate for Biomedical Applications</p> <p><b>Kazi Sabiruddin</b>, <i>Indian Institute of Technology Indore (IIT Indore), India</i></p>
15:20-15:40	<p>Title: CO<sub>2</sub> Capture with Activated Carbon from Hydrothermal Treatment of Synthetic Urban Wastes</p> <p><b>Alejandro AMAYA</b>, <i>Universidad de la República, Uruguay</i></p>
15:40-16:00	<p>Title: Superaustenitic Stainless Steels: Characteristics, Properties and Applications</p> <p><b>Alessio Malandrucolo</b>, <i>University of Trento, Italy</i></p>
REFRESHMENT BREAK 16:00-16:20	
16:20-16:40	<p>Title: The Role of Digital Twins Concept in Old Tbilisi Superblocks Model Development</p> <p><b>Nino Chachava</b>, <i>Georgian Technical University, Georgia</i>  <b>Nikoloz Lekveishvili</b>, <i>NINCLP Engineering Idea, Georgia</i></p>
16:40-17:00	<p>Title: Stimuli Responsive Hydrocolloid Encased Bioactives: Release Behaviour and Kinetics</p> <p><b>Minni Singh</b>, <i>Punjabi University, India</i></p>
17:00-17:20	<p>Title: Unlocking the Key Factors, Mechanisms and Solutions of OCTG Material Failure for China Oil &amp; Gas Industries</p> <p><b>Lihong Han</b>, <i>CNPC Tubular Goods Research Institute, China</i></p>

---

17:20-17:40	<p>Title: A New Concern of Plastic Waste-Fostering Antimicrobial Resistant (AMR) Biofilms in Water Bodies</p> <p><b>Preethy Chandran</b>, <i>Cochin University of Science and Technology, India</i></p>
17:40-18:00	<p>Title: The Development of Recycled Oyster Shell Waste in Polymer Modified Green Concrete Towards Enhanced Mechanical Properties and Environmental Benefits</p> <p><b>Fanny Tang</b>, <i>Hong Kong Metropolitan University, Hong Kong</i></p>
18:00-18:20	<p>Title: Mechanical and Microstructure Properties of Eco-Friendly Sand Concrete Incorporating Cane Ash</p> <p><b>Razika Charime</b>, <i>University 20 August 1955, Skikda, Algeria</i></p>
18:20-18:40	<p>Title: Development and Applications of Textile Nanocoatings using Cellulosic Nanowhiskers</p> <p><b>Kunal Singha</b>, <i>National Institute of Fashion Technology, India</i></p>

---

## NETWORKING

End of Day 1

---

# SCIENTIFIC PROGRAM

# DAY 02

TUESDAY

MARCH 25, 2025

HALL 01

08:30-08:40

## Introduction

**Moderator**

**Anton Kraler**, *University of Innsbruck, Timber Engineering Unit, Austria*

**Sessions: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis**

## Distinguished Speaker Talks

**Session Chair**

**Gary J. Dickelman**, *EPSScentral LLC, USA*

**Session Chair**

**Jorge A. Gonzalez**, *Florida International University, USA*

08:40-09:00

Title: Properties and Dynamics of Long-Range Topological Objects in Heterogeneous Media: Applications in Advanced Materials Science and Technology

**Jorge A. Gonzalez**, *Florida International University, USA*

09:00-09:20

Title: Numerical Simulation of Electrostatically Supported Painting Processes using a High-Speed Rotary Bell from Liquid Charging, Break-Up to Spray Propagation

**Qiaoyan Ye**, *Fraunhofer Institute for Manufacturing Engineering and Automation, Germany*

09:20-09:40

Title: A Mathematical Model for Aerospace Product MRO Scheduling with Remanufacturing

**Yasser Ghamary**, *Concordia University, Canada*

09:40-10:00

Title: Integrating Sensory Modalities and Technologies in Artistic Contexts

**Piper Hutson**, *Lindenwood University, USA*



---

10:00-10:20 Title: Water as a Material for Sustainable and Biocompatible Antennas  
**Benigno Rodríguez Díaz**, *Universidad de la República, Uruguay*

---

GROUP PHOTO 10:20-10:30

REFRESHMENT BREAK 10:30-10:50

---

10:50-11:10 Title: Bacterial Nanocellulose Produced as a By-Product of the Brewing Industry and used as an Adsorbent for Synthetic Solutions for Co (II), Cu (II), Ni (II) and Fe (III)  
**Gabriela Martins de Paiva**, *Federal University of São João del-Rei, Brazil*

---

11:10-11:30 Title: Coupling X-Ray Beam Induced Current ToF-XBIC with High Time Resolution to Characterize Semiconductor-Based Detectors  
**Thu Nhi Tran Caliste**, *European Synchrotron Radiation Facility, France*

---

11:30-11:50 Title: Evolution of LDL Research: New Technologies and New Discoveries  
**Chu-Huang (Mendel) Chen**, *The Texas Heart Institute, USA*

---

11:50-12:10 Title: Hydrogel Coatings on Universal Medical Devices with Water-Responsive Janus Adhesion and Acidity-Triggered Transformation for Adaptive Antibacterial Treatment and Fluorescence Diagnosis  
**Li Ming**, *Peking University People's Hospital, China*

---

12:10-12:30 Title: Low Cost Materials for Several Applications, Obtained by the Simple Spray Pyrolysis  
**Beya Ouertani**, *University of Carthage & Research and Technology Center of Energy (CRTE), Tunisia*

---

12:30-12:50 Title: Advancing Fit Technologies: Key Trends and Requirements for Clothing Element Assessment  
**Olga Paraska**, *Khmelnytskyi National University, Ukraine*

---

GROUP PHOTO 12:50-13:00

LUNCH BREAK 13:00-13:40

---

13:40-14:00 Title: Cause-Effect Analysis for Process Parameters in the Formation of the Shell Zone during DCC Process of Al Alloys  
**Alessio Malandrucolo**, *University of Trento, Italy*

---

14:00-14:20 Title: Irradiation Damage Mechanism and *In-situ* Micro-Mechanical Properties of Advanced First-Wall W-Y<sub>2</sub>O<sub>3</sub> Material  
**Jun Huang**, *Hefei University of Technology, China*

---

14:20-14:40	Title: Mathematical Modeling of the Change of Electric Potential Energy during the Formation of Covalent Polar and Ionic Chemical Bonds in a Two-Atomic Molecule <b>Lyakishev Vladislav Konstantinovich</b> , <i>Irkutsk State University, Russia</i>
14:40-15:00	Title: Life Cycle Cost Analysis Comparison Between Structural Steel and Light Gauge Steel Structures <b>Lama Mohamed Ashraf Ibrahim Emam Aly</b> , <i>German University in Cairo, Egypt</i>
15:00-15:20	Title: A Novel Polymer Nanoparticle for Drug Delivery System <b>Omed Qadir Hama Ameen Al-Jaf</b> , <i>Charmo University, Iraq</i>
15:20-15:40	Title: Interconnecting Internet of Things Devices to a Mobility-Supporting Lora Network Using HWMP for Energy-Efficient B.A.T.M.A.N. <b>M. Archana</b> , <i>Annamalai University, India</i>
15:40-16:00	Title: Electrochemical-Piezoelectric Detection of Heavy Metal Ions in Potable Water using Ultrathin-Film of Functionalized Nanotubes and its Machine Learning Analysis <b>Parul Taneja</b> , <i>Symbiosis University of Applied Science, India</i>
REFRESHMENT BREAK 16:00-16:20	
16:20-16:40	Title: Foam- Surfactant Template Synthesis of Nanomaterials for Boosting the Electrochemical Energy and Sensor Reactions <b>Mohamed Ali Ghanem</b> , <i>King Saud University, Saudi Arabia</i>
16:40-17:00	Title: Study of Photocatalytic, Photodetection as well as Photovoltaic Studies Based on $Cd_x Zn_{1-x} S$ Nanoparticles <b>Satyajit Saha</b> , <i>Vidyasagar University, Midnapore, India</i>
17:00-17:20	Title: Development of Novel Spin-Controlled Optoelectronic Eco-Friendly and Energy Efficient <i>hybrid</i> Inorganic-Organic Heterostructure <b>Puja Dey</b> , <i>Kazi Nazrul University, India</i>
17:20-17:40	Title: Nanotechnology: An Emerging Field for Enhancing Micronutrient Enrichment in Millets <i>via</i> Biofortification Strategies-Present Knowledge and Prospects for the Future <b>Anbu Malar. M</b> , <i>Stella Maris College (Autonomous) Chennai, India</i>
17:40-18:00	Title: Optimization of Process Parameters in Friction Stir Processing for the Development of Polymer-Derived Aluminium Matrix Composite <b>Sujith Kumar Kavanur Ramesh</b> , <i>PES University, India</i>



---

18:00-18:20	Title: Methods of Application of Nanoscale Coatings on Textiles <b>Anjali Agrawal</b> , <i>National Institute of Fashion Technology, India</i>
18:20-18:35	Title: Research about Silicon Based GaN Devices and the Related System <b>Hongyu Yu</b> , <i>Shenzhen Polytechnic University, China</i>
18:20-18:35	Title: Development of Textile Substrate for Versatile Applications by using Nano-Metal Particles <b>Abhijit Mukherjee</b> , <i>National Institute of Fashion Technology, India</i>

---

Interdisciplinary Talks in Materials Science

Distinguished Speaker Talks

**Session Chair** **Benigno Rodríguez Díaz**, *Universidad de la República, Uruguay*

**Session Chair** **Suresh G.S.**, *The National Institute of Engineering (Retd.), India*

10:50-11:10  
 Title: Has Knowledge Economy a Role to Play in Transfusion Medicine?  
**Cees Th. Smit Sibinga**, *University of Groningen and IQM Consulting, Netherlands*

11:10-11:30  
 Title: Design of Accessible Educational Tools for Independent Learning by Persons with Blindness  
**Richa Gupta**, *Indraprastha Institute of Information Technology Delhi, India*

11:30-11:50  
 Title: Structural and Optoelectronic Properties of Newly Designed Lead Halides PbXY (X, Y = F, Cl, Br, I) Janus Layers: DFT Study  
**Anjana E. Sudheer**, *Indian Institute of Information Technology Design and Manufacturing, India*

11:50-12:10  
 Title: Update on Nasopharyngolaryngoscopy in Head and Neck Surgery  
**Hugo Galera-Ruiz**, *University of Seville, Spain*

12:10-12:25  
 Title: Role of Pesticide Degrading Bacterium, *Rhodococcus Biphénylvivorans*, in Breaking Down Crystal Violet Dye  
**Sirajunnisa Abdul Razack**, *Chulalongkorn University, Thailand*

12:25-12:40  
 Title: On Analytical Solutions of a System of Nonlinear Partial Differential Equations  
**Kholiknazar Kuchakshoev**, *University of Central Asia, Tajikistan*

GROUP PHOTO 12:40-12:50

LUNCH BREAK 12:50-13:30

13:30-13:50  
 Title: An Interplay of Artificial Intelligence-Based Customer Analysis on the Performance of Customer Relationship Management in Organized Retail Outlets: Serial Mediation Approach  
**R. Swaranalatha**, *PSG College of Arts & Science, Coimbatore, India*

13:50-14:10	<p>Title: D.A Pospelov Identified in 1996 Ten “Hot Spots” in the Field of AI</p> <p><b>Alexey Averkin</b>, <i>Federal Research Center “Computer Science and Control” of the Russian Academy of Sciences, Russia</i></p>
14:10-14:30	<p>Title: Insight into the Dynamics of NiO-Nanoparticle Induced Methylation Changes and Cell Death Mechanisms in Plant</p> <p><b>Indrani Manna</b>, <i>Presidency University, India</i></p>
14:30-14:50	<p>Title: Applications of Machine Learning and Deep Learning in Pavement Crack Detection and Characterisation: A Comparative Approach</p> <p><b>Harris Khan</b>, <i>Near East University, Turkey</i></p>
14:50-15:10	<p>Title: Photochemical Processes in Petroleum Products by Sunlight</p> <p><b>Ulvuyya Jeyhun Yolchuyeva</b>, <i>Institute of Petrochemical Processes of Ministry of Science and Education Republic of Azerbaijan, Azerbaijan</i></p>
15:10-15:30	<p>Title: 2D Materials Defects Characterization using AI/ML</p> <p><b>Farhan Mahbub</b>, <i>World University of Bangladesh, Bangladesh</i></p>
15:30-15:50	<p>Title: A Bibliometric Study on the Progress and Frontiers of Vegetable Fiber Research</p> <p><b>Shuyang Li</b>, <i>The Hong Kong Polytechnic University, Hong Kong</i></p>
REFRESHMENT BREAK 15:50-16:10	
16:10-16:30	<p>Title: Iron-Tannic Acid Nano Coating: A Promising Treatment Approach for Enhancing Lactococcus Lactis Antibiotic Resistance</p> <p><b>Marwa M. Elmaghrabi</b>, <i>King Saud University, Saudi Arabia</i></p>
16:30 -16:50	<p>Title: Simultaneous Removal of Toxic Cationic Water Pollutants using ZnO-Curcumin Decorated Graphene Oxide Composite</p> <p><b>Nabanita Chakraborty</b>, <i>Indian Institute of Technology Hyderabad, India</i></p>
16:50-17:10	<p>Title: Resonating Particle Dynamics in Laser Irradiated Matter with Nano-Antenna Dopes</p> <p><b>Konstantin ZSUKOVSKI</b>, <i>Wigner Research Centre for Physics, Hungary</i></p>
17:10-17:30	<p>Title: A Novel Multifunctional Theranostic Platform for Chemo-Photothermal Co-Therapy of Hepatocellular Carcinoma</p> <p><b>Uzma Azeem Awan</b>, <i>National University of Medical Sciences (NUMS), Pakistan</i></p>

17:30-17:50 Title: Additive Manufacturing of Mo-SiC Multimaterial Component  
**Marina Aghayan**, *A.B. Nalbandyan Institute of Chemical Physics, Armenia*

### Video Presentations

V1 Title: A Biogenic Approach to Develop Guava Derived Edible Copper and Zinc Oxide Nanocoating to Extend Shelf Life and Efficiency for Food Preservation  
**Susmita Dey Sadhu**, *University of Delhi, India*

V2 Title: Electrosynthesis of Organic 2D Conducting Polymer Films  
**Luiza Aguiar do Nascimento**, *La Trobe University, Australia*

### NETWORKING

End of Day 2

BOOKMARK YOUR DATES

8th Edition of

**ADVANCED MATERIALS SCIENCE  
WORLD CONGRESS**

MARCH 2026 | ROME, ITALY

Peers Alley Media

1126 59 Ave East, V5X 1Y9, Vancouver BC, Canada

WhatsApp No: +1 (506) 909-0537

# SCIENTIFIC PROGRAM



VIRTUAL EVENT

7th Edition of

# ADVANCED MATERIALS SCIENCE WORLD CONGRESS

March 24-26, 2025

<https://advanced-materialsscience.peersalleyconferences.com/>

# SCIENTIFIC PROGRAM

# DAY 01

MONDAY

MARCH 24, 2025

GMT - Greenwich Mean Time

07:20-07:30

## Inaugural Ceremony

**Sessions: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis**

## Distinguished Speaker Talks

07:30-07:50

Title: Chemical Design of Magnetic Switchable Molecular Materials

**Giordano Poneti**, *Università degli Studi della Tuscia, Italy*

07:50-08:10

Title: Efficient Mapping of the Thalamocortical Monosynaptic Connectivity *in vivo* by Tangential Insertions of High-Density Electrodes in Cortex

**Jeremie Sibille**, *Charité-Universitätsmedizin Berlin, Germany*

08:10-08:30

Title: Comparison and Critical Review of Durability Design in Design Codes

**Diala Basim Al-Haddad**, *The British University in Dubai, UAE*

08:30-08:50

Title: Development and Performance Analysis of Microwave Planar Sensor for Food Quality Assessment

**Kalindi Shivaji Shinde**, *Sardar Vallabhbhai National Institute of Technology, India*

08:50-09:10

Title: Enhancement in Optical and Electrical Characteristics of GaN-Based HEMT by SiNx Nano-Mask

**Tu Huynh Pham**, *National Yang Ming Chiao Tung University, Taiwan*

09:10-09:30

Title: Theoretical and Numerical Study of the Decay in a Viscoelastic Bresse System

**Mohammad El-Hindi**, *Beirut Arab University, Lebanon*

09:30-09:50

Title: Optical Properties and Band Gap Analysis of Perovskite Thin Films

**Arevik Asatryan**, *A.B. Nalbandyan Institute of Chemical Physics, Armenia*



09:50-10:10	Title: An Overview of Design and Development of Biomimetic Bone Scaffolds Using Heterogeneous TPMS Lattice Structures <b>Gangaram Mandaloi</b> , Rewa Engineering College, India
10:10-10:30	Title: Nanotechnology: An Emerging Field for Enhancing Micronutrient Enrichment in Millets <i>via</i> Biofortification Strategies-Present Knowledge and Prospects for the Future <b>Anbu Malar. M</b> , Stella Maris College (Autonomous) Chennai, India
10:30-10:50	Title: Phytochemicals Screening, Antimicrobial Activities and Statistical Validation of Bioactive Compounds of <i>Morella Rubra Sieb. Et Zucc</i> <b>Susan Sharma</b> , Kathmandu University, Nepal
10:50-11:10	Title: A Biogenic Approach to Develop Guava Derived Edible Copper and Zinc Oxide Nanocoating to Extend Shelf Life and Efficiency for Food Preservation <b>Susmita Dey Sadhu</b> , University of Delhi, India
REFRESHMENT BREAK 11:10-11:30	
11:30-11:50	Title: Developments in Directed Metal-Catalyzed C-H Bond Functionalization <b>Hamad H. Al Mamari</b> , Sultan Qaboos University, Oman
11:50-12:10	Title: EDISnet: Enhanced Detection of Image Splicing Manipulations Using Siamese Networks <b>Khawla Hussein Ali</b> , University of Basrah, Iraq
12:10-12:30	Title: Stable and Efficient Data Transfer in Disaster Scenarios <b>Ashwani Kush</b> , Kurukshetra University (KUK), India
12:30-12:50	Title: Revitalising Golshan and Sharifiyeh Caravanserais: A study in Adaptive Reuse and Urban Preservation <b>Faezeh Hoursan</b> , Sapienza University of Rome, Italy
12:50-13:10	Title: Powering Rural Entrepreneurship Through Energy Production and Storage <b>Rakesh Suryadevara</b> , ICFAI Law School, India
LUNCH BREAK 13:10-13:50	
13:50-14:10	Title: Development of a Durable and Stable Optical Fiber Probe Using Polyvinyl Alcohol Hydrogel for Enhanced Sensing Applications <b>Kavita Sharma</b> , Indian Institute of Technology Bombay, India

14:10-14:30	<p>Title: Microbial Production of N-Acetyl-D-Glucosamine (Glcnac) for Versatile Applications: Biotechnological Strategies for Green Process Development</p> <p><b>Sancharini Das</b>, <i>Savitribai Phule Pune University, CSIR National Chemical laboratory, India</i></p>
14:30-14:50	<p>Title: Degradation of Energetic Material 2,4,6, Trinitro Toluene Using Integrated Approach</p> <p><b>Garima Upreti</b>, <i>Delhi Technological University, India</i></p>
14:50-15:10	<p>Title: A Review of the Effect of Magnetic Field Using Nanofluids and Ultrasonic Amplification Technology on Water Desalination by Solar Stills</p> <p><b>Kimya Samadi</b>, <i>Islamic Azad University, Iran</i></p>
15:10-15:30	<p>Title: Universal Law of Response</p> <p><b>Ugur Saglam</b>, <i>Istanbul University, Turkey</i></p>
15:30-15:50	<p>Title: An Efficient Methodology for the Prediction and Improvement of Multi-Laser Shock Peening on Fatigue Life</p> <p><b>Dawood Ahmed Desai</b>, <i>Tshwane University of Technology, South Africa</i></p>
15:50-16:10	<p>Title: On Some Features of Complex Mechanical Systems Analysis</p> <p><b>Alexander Trubayev</b>, <i>National Technical University "Kharkiv Polytechnic Institute", Ukraine</i></p>
REFRESHMENT BREAK 16:10-16:30	
16:30-16:50	<p>Title: Water-Activated Polymers to Mitigate Growing Global Challenges in the Healthcare and Environmental Sectors</p> <p><b>Richard J. Spontak</b>, <i>North Carolina State University, USA</i></p>
16:50-17:10	<p>Title: Creating a Blockchain-Based Audit Trail for IoT Device Interactions and Data Exchanges to Enhance Transparency and Security</p> <p><b>Firend Alan Rasch</b>, <i>American International Institute, USA</i></p>
17:10-17:30	<p>Title: Engineering Conducting Polymer Interfaces for Enhanced Organic Photovoltaic Performance</p> <p><b>Sugirtha Krishnamurthy</b>, <i>Apple Inc, USA</i></p>
17:30-17:50	<p>Title: Analysis of Permanent Deformation in Asphalt Mixtures Using Mohr–Coulomb Criteria</p> <p><b>Fabiano Pereira Cavalcante</b>, <i>JBR Engineering, Brazil</i></p>

---

17:50-18:10 Title: Guided Fantasy: Research for Innovation  
**Adriano Bernardo Renzi**, *MobileLive Research Lab, Canada*

---

18:10-18:30 Title: On the Development of a Constitutive Model for Steel Subjected to Fire  
**Gustavo Provençano Vilaro**, *Federal University of Rio de Janeiro, Brazil*

**END OF DAY 1**

---

# SCIENTIFIC PROGRAM

# DAY 02

TUESDAY

MARCH 25, 2025

GMT - Greenwich Mean Time

07:20-07:30

## Introduction

Sessions: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis

## Distinguished Speaker Talks

07:30-07:50

Title: Electrosynthesis of Organic 2D Conducting Polymer Films

**Luiza Aguiar do Nascimento**, *La Trobe University, Australia*

07:50-08:10

Title: The Performance of Handmade Silk Product's from Shkodra Region, Albania

**Blerina Kolgjini**, *Polytechnic University of Tirana, Albania*

08:10-08:30

Title: First-Principles Insights on Si-Binder Interface for Next-Gen Lithium-Ion Batteries

**Rita Maji**, *Università di Modena e Reggio Emilia, Italy*

08:30-08:50

Title: An Assessment and Mapping of Groundwater Potential Zones in Darjeeling Himalayan Region Using Frequency Ratio and Analytical Hierarchy Process

**Kabirul Islam**, *Karajgram High School, India*

08:50-09:10

Title: Additive Manufacturing of Mo-SiC Multimaterial Component

**Marina Aghayan**, *A.B. Nalbandyan Institute of Chemical Physics, Armenia*

09:10-09:30

Title: Cell Death Induction in 2D and 3D Prostate Cancer Models Through Green Nanoparticles Synthesized from *Stephania Glabra*

**Reena Vohra Saini**, *MMEC, Maharishi Markandeshwar (Deemed to be University), India*

09:30-09:50

Title: The (TAWOCK) Model and their Effect on Training of Female Computer Teachers

**Remsh Nasser Alqahtani**, *King Saud University, Saudi Arabia*

09:50-10:10	Title: Characterization of Polyhydroxyalkanoate Films and its Application <b>Shina Gautam</b> , <i>Harcourt Butler Technical University, India</i>
10:10-10:30	Title: Damage Accumulation and Estimated Nonfailure Operating Time of Ideal Elastoplastic Structures <b>Yuriy Neustadt</b> , <i>Samara State Technical University, Russia</i>
10:30-10:50	Title: Femtosecond Laser Ablation of Decagonal and Icosahedral Quasicrystals: Synthesis and Structural Analysis of Nanoparticles <b>Bibek Kumar Singh</b> , <i>Sikkim University, India</i>
REFRESHMENT BREAK 10:50-11:10	
11:10-11:30	Title: Facile Fabrication of a Z-Scheme G-C <sub>3</sub> N <sub>5</sub> /Gd-MOF/Silver Nanocube Composite as a New Generation Visible Light Active Photocatalyst for Abatement of Persistent Toxic Pollutants <b>Varsha UshaVipinachandran</b> , <i>Vellore Institute of Technology, India</i>
11:30-11:50	Title: Effect of Nano Fillers on Areca Fiber Reinforced with Hybrid Composites for Aerospace Application <b>Sanjay Kumar S M</b> , <i>SJB Institute of Technology, India</i>
11:50-12:10	Title: <i>In-situ</i> Bioremediation of 1,3,5-Trinitroperhydro-1,3,5-Triazine Contaminated Sediments Using Endemic Microbial Formulation <b>Avantika Shukla</b> , <i>Indira Gandhi Delhi Technical University for Women, India</i>
12:10-12:30	Title: Applications of Machine Learning and Deep Learning in Pavement Crack Detection and Characterisation: A Comparative Approach <b>Harris Khan</b> , <i>Near East University, Turkey</i>
12:30-12:50	Title: The Synthesis, Crystal Structure, Hirshfeld Surface Analysis, Luminescence, Aggregation Behaviors, (I-V) Characteristics, and Antibacterial Assay of Cd(II) and Zn(II) Complexes Containing 2-Mercaptopyridine <b>Arijit Das</b> , <i>Bir Bikram Memorial College, India</i>
12:50-13:10	Title: Testing Artificial Intelligence to Minimize Costs in the Fashion Industry: An Approach Towards Sustainable Advertising <b>Nadia Atiyah Atshan</b> , <i>Middle Technical University, Iraq</i>
LUNCH BREAK 13:10-13:40	

13:40-14:00	Title: Contradictions in the Generally Accepted Mechanism of Thermal Runaway in Lithium-Ion Batteries <b>Nikolay Efimovich Galushkin</b> , <i>Don State Technical University, Russia</i>
14:00-14:20	Title: Water Desalination Using Atmospheric Pressure Plasma Combined with Thermal Treatment <b>Ayman Ahmed Saber Mohamed</b> , <i>Sohag University, Egypt</i>
14:20-14:40	Title: Synthesis, Characterization and Application of Metal Nanoparticles from Plant Based Terpenoids – A Review <b>Manisha Agrawal</b> , <i>Krishna Vikash Group of Institution, India</i>
14:40-15:00	Title: The Role of Probiotics in Skin Care: Advances, Challenges and Future Needs <b>Fatemeh Safaei</b> , <i>Iranian Research Organization for Science and Technology, Iran</i>
15:00-15:20	Title: Performance Evaluation of 2D and 3D Beam and Channel Tracking Using Adaptive Filtering Techniques <b>Ruaa Shallal Abbas Anooz</b> , <i>University of Tabriz, Iran</i>
15:20-15:40	Title: Assessment of the Micro-Tensile Bond Strength of a Novel Bioactive Dental Restorative Material (Surefil One) <b>Reham A. Alzhrani</b> , <i>King Abdulaziz University, Saudi Arabia</i>
15:40-16:00	Title: 2D-BioPAD: Supple Graphene Bio-Platform for Point-of-Care Early Detection and Monitoring of Alzheimer's Disease <b>Apostolos Tsolakis</b> , <i>Q-PLAN International Advisors PC, Greece</i>
16:00-16:20	Title: Lipid-Based Nanoparticles as a Promising Treatment for the Skin Cancer <b>Parisa Golestani</b> , <i>Università del Piemonte Orientale, Italy</i>
REFRESHMENT BREAK 16:20-16:40	
16:40-17:00	Title: Tailings in Abandoned Mining Sites: Impact, Treatment and Recycling for Sustainable Development <b>Chiraz Abdelmalak Babbou</b> , <i>University of Tunis El Manar, Tunisia</i>
17:00-17:20	Title: Lesion Classification by Model-Based Feature Extraction: A Differential Affine Invariant Model of Soft Tissue Elasticity in CT Images <b>Weiguo Cao</b> , <i>Stony Brook University, USA</i>
17:20-17:40	Title: Comprehensive Evaluation of Rapid-Set Concrete Mixes for Pavement Repair <b>Daniel D. Akerele</b> , <i>University of Washington, USA</i>



---

17:40-18:00	Title: Quantum Chemical Studies of Carbon-Based Graphene-like Nanostructures: From Benzene to Coronene <b>Alberto Soares Vanny</b> , <i>Federal University of Espírito Santo, Brazil</i>
18:00-18:20	Title: Evolutionary Algorithms Approach for Search Based on Semantic Document Similarity <b>Chandrashekar Muniyappa</b> , <i>University of North Dakota, USA</i>
18:20-18:40	Title: SBB-Chi2-A2: Stacking of Bagging-Boosting with the Blend Chi-Square for effective Prediction of Aortic Aneurysm using Biomarker Profiling <b>Saurabh Aggarwal</b> , <i>San Jose State University, USA</i>

---

**END OF DAY 2**

---

# SCIENTIFIC PROGRAM

# DAY 03

WEDNESDAY

MARCH 26, 2025

GMT - Greenwich Mean Time

07:20-07:30

## Introduction

**Sessions: Materials Science and Engineering | Nanomaterials and Nanotechnology | Smart Materials | Biomaterials | Energy Materials | Crystallography | Graphene Technology | Chemistry | Carbon and 2D Materials | Semiconductors | Optics | Green Technologies | Metals and Alloys | Perovskites | Artificial Intelligence | Robotics | Catalysis**

## Distinguished Speaker Talks

07:30-07:50

Title: Investigation on the Crack Propagation of Rock-Concrete Interface Under Fatigue Loading

**Xiaoyu Zhao**, *Chang'an University, China*

07:50-08:10

Title: Medium Viscosity as a Mechanical Cue Regulating Osteogenic Differentiation of Human Mesenchymal Stem Cells

**Yin Quan Chen**, *National Yang Ming Chiao Tung University, Taiwan*

08:10-08:30

Title: Quasi-Static and Dynamic Nanoindentation Studies on the Influence of Cooling Window, Grain Size, and Densification on Hardness Anisotropy in AlN Ceramics

**Wan Fahmin Faiz Bin Wan Ali**, *Universiti Teknologi Malaysia, Malaysia*

08:30-08:50

Title: Sustainable Use of Composite Materials for Geotechnical Structures

**Pranjal Barman**, *Central Institute of Technology Kokrajhar, India*

08:50-09:10

Title: *In Silico* Gene Expression for Simultaneous Cellulose Hydrolysis and Bioplastic Production from Agricultural Waste

**Ziningi Rosebud Myeni**, *Durban University of Technology, South Africa*

09:10-09:30	Title: CLARA: Clustered Learning Automata-Based Routing Algorithm for Efficient FANET Communication <b>Somayeh Danesh</b> , <i>Islamic Azad University, Iran</i>
09:30-09:50	Title: Developing Iron Phosphate Glass from Melt-Quench Simulations Using <i>Ab-Initio</i> Molecular Dynamics <b>Sruti Sangeeta Jena</b> , <i>Indira Gandhi Centre for Atomic Research, India</i>
09:50-10:10	Title: Enhancing Supply Chain Forecasting with Hybrid Stacked Ensembles <b>Lucia Agnes Beena T</b> , <i>Holy Cross College (Autonomous), India</i>
10:10-10:30	Title: Optimizing Input Parameters Involved in EDM Process of Hardened, Normalized and Annealed 0.2%-C Steel Samples <b>Lav Maheshwari</b> , <i>Manipal University Jaipur, India</i>
10:30-10:50	Title: The Mechanism of Friction and Wear of Polymer-Polymer Friction Pairs as Revealed by Mass Spectrometry, Plasma-Induced Thermoluminescence and Interface Modeling <b>Aleksei Pozdnyakov</b> , <i>Institute for Problems in Mechanical Engineering of RAS &amp; Ioffe Institute, Russia</i>
REFRESHMENT BREAK 10:50-11:10	
11:10-11:30	Title: Non-Effervescent Polymeric Floating Tablets of Clarithromycin and Pantoprazole: Preparation and <i>In-vitro</i> Evaluation for Improved Gastric Drug Retention <b>Syed Shafqat Ali Shah</b> , <i>Liaquat University of Medical and Health Sciences, Pakistan</i>
11:30-11:50	Title: Eye Tracking Review: Importance, Tools and Applications <b>Taisir Hazim Alhilo</b> , <i>University of Kerbala, Iraq</i>
11:50-12:10	Title: <i>Proteus Mirabilis</i> —Mediated Green Synthesis of Magnesium Nanoparticles: Optimization and their Antimicrobial Activity <b>Asma Shahzad</b> , <i>Lahore College for Women University, Pakistan</i>
12:10-12:30	Title: Fashion Artistry Unleashed by Artificial Intelligence (AI) Ingenuity: The Alchemy of Design <b>Arpita Nayak</b> , <i>KIIT School of Liberal Studies, India</i>
12:30-12:50	Title: Survey on QoS Guaranteed Routing in Cognitive Radio-Adhoc Network <b>Niranjan Muchandi</b> , <i>KLE Technological University, India</i>

LUNCH BREAK 12:50-13:40

13:40-14:00 Title: An Investigation on In-Fluid AFM Techniques for Characterization of Soft Samples

**Cagri Yilmaz**, *Akdeniz University, Turkey*

14:00-14:20 Title: The Use and Mechanisms of Environmentally Friendly Biofilm Inhibitory or Disruption

**Tugba Kilic**, *Gazi University, Turkey*

14:20-14:40 Title: Quantum Size Effect of Bloch Wave Functions of Ultra-High Energy Electrons in a Thin Single-Crystal Film

**Shkorniyakov Sergey**, *National Research Center "Kurchatov Institute", Russia*

14:40-15:00 Title: Enhanced Oil Recovery Using Nanocomposite-Based Chemical Flooding: A Comparative Study on Light and Heavy Oil

**Nahid Sarlak**, *Lorestan University, Iran*

15:00-15:20 Title: Hyaluronans' Molecular Mass Influence on Their Thermo-Oxidative and Thermal Destruction Processes

**Li Ekaterina Gavrilovna**, *M.V. Lomonosov Institute of Fine Chemical Technologies, Russia*

15:20-15:40 Title: Academic Optimism, Capital Indicators as Predictors of Cognitive, Affective, and Psychomotor Learning Outcome Among Students in Secondary School, Hierarchical Regression Approach (HRA)

**Anthonia Laetitia Anakwue**, *University of Calabar, Nigeria*

15:40-16:00 Title: A Novel Twisting Metamaterial Based on Cells Composed of Two Triangular Lattices

**Abderrahim Barhoumi**, *Moulay Ismail University, Morocco*

16:00-16:20 Title: A Way of Designing TIA for Quantum Sensing

**Teuma Mbezi Michel**, *National Higher Polytechnic School of Douala, Cameroon*

16:20-16:40 Title: Energy Transition in the Maritime Industry: Towards a More Resilient Organization

**Samah Chemli Horchani**, *Tunis El-Manar University, Tunisia*

16:40-17:00	<p>Title: Integrating TPACK and TAM Frameworks for Effective Technology Use in Teaching Mathematics: A Study of Rwandan Primary Schools</p> <p><b>Innocente Uwineza</b>, <i>University of Rwanda College of Education, Rwanda</i></p>
17:00-17:20	<p>Title: Influence of Geomaterial Nature on the Buildings Fracturation in the Context of an Active Tectonic Zone: Case of Agadez City (North Niger)</p> <p><b>Baraou Idi Souley</b>, <i>University of Agadez, Niger</i></p>
17:20-17:40	<p>Title: The Influence of the Nature and Strength of Montmorillonite's Acidic Sites on the Flame-Retarding Properties of Polymeric Composites</p> <p><b>Marco Antonio Chaer do Nascimento</b>, <i>Universidade Federal do Rio de Janeiro, Brazil</i></p>
17:40-18:00	<p>Title: Exploring the Frontiers of Photonics: Characterization of Borotellurite Glass for Advanced Optical Applications</p> <p><b>Evangelina Cinhia Cardillo</b>, <i>Departamento de Química - Universidad Nacional del Sur - CIC Bs. As. - Bahía Blanca, Argentina</i></p>

**END OF DAY 3**

**BOOKMARK YOUR DATES**

8th Edition of

**ADVANCED MATERIALS SCIENCE  
WORLD CONGRESS**

MARCH 2026 | ROME, ITALY