

International Summit on

MATERIALS SCIENCE AND ENGINEERING

February 27, 28, & March 1, 2025
Bangkok, Thailand

@ Room Garden1

Theme:

**"Innovations & Advanced
Technologies in Materials Science"**

Venue

**Ambassador Hotel Bangkok,
Thailand**

Materials Arena 2025

<https://materialsconference.mindaauthors.com/>

SCIENTIFIC AGENDA

DAY-1

27 February, 2025

In-person Conference

Day 1

09:00 - 09:30 Onsite Registration & Seating Arrangement

09:30 - 09:45 Introduction & Opening Ceremony

Keynote Presentations

09:45 - 10:15 **Title: Structural Response of PVC Foam-Based Sandwich Structures Subjected to Extreme Loading Conditions**
Prof. Zhongwei Guan, *Advanced Materials Research Centre Technology Innovation Institute, UAE*

10:15 - 10:45 **Title: Towards the Carbon Cyclic Economy: Alternative Carbon-Sources and new Catalytic Materials for Transitioning away from Fossil-C**
Prof. Michele Aresta, *Innovative Catalysis for Carbon Recycling-IC2R, Italy*

Refreshment & Coffee - 10:45- 11: 05

Keynote Presentations Cont..

11:05 - 11:35 **Title: Transition from Fossil-C to Renewable-C (Biomass and CO₂) Driven by Hybrid Catalysis**
Prof. Angela Dibenedetto, *Interuniversity Consortium for Chemical Reactivity and Catalysis-CIRCC, Italy*

11:35 - 12:05 **Title: Powder Based Additive Manufacturing of Polymers and Metallic Alloys**
Dr. Urvashi Gunpath, *University of Derby, UK*

12:05 - 12:35 **Title: Safety Management for Nanomaterials in Research Environments**
Prof. Thierry Meyer, *Institute of Chemical Sciences and Engineering, Switzerland*

12:35 - 13:05 **Title: Limitations & Opportunities in Creating Lignin-Derived Carbon Fibers**
Prof. Dimitris S Argyropoulos, *North Carolina State University, USA*

Memorable Group Photo & Tempting Buffet lunch - 13:05 - 13:50

Oral Presentations

13:50 - 14:15 **Title: Influence of Long-Term Moisture Exposure and Temperature on the Mechanical Performance of Hybrid Fiber-Reinforced Polymeric Composite Laminates**
Prof. Glen Bright, *University of KwaZulu-Natal, South Africa*

14:15 - 14:40 **Title: Structure Analysis of Adhesion Interface Using Neutron Reflectometry**
Prof. Hiroyuki Aoki, *High Energy Accelerator Research Organization, Japan*

14:40 - 15:05 **Title: Synergistic Flame Retardant Properties of Organic Boron-Nitrogen and Phosphorus-Nitrogen Flame Retardants and Inorganic Flame Retardants**
Prof. Ping Liu, *South China University of Technology, China*

Refreshment & Coffee 15:05 - 15:25

Oral Presentations Cont...

- 15:25 - 15:50** **Title: Improvement of Interlaminar Strength and Electrical Conductivity of Spread-Tow Carbon Fiber Composites through the Inserted Carbon Nanotube Sheets**
Dr. Hongbing Lu, *The University of Texas at Dallas, USA*
- 15:50 - 16:15** **Title: Evaluation of the Effect of Lithium-Substitution in the Synthesis and Characterization of Bioactive Glass Ceramics in the SiO_2 -CaO- Na_2O - P_2O_5 System for Biomedical Application**
Sudip Kumar Das, *University of Kolkata, India*
- 16:15 - 16:40** **Title: Exploring the laser-induced Phase Changes in two-dimensional MoTe_2 via Electron Microscopy and Spectroscopy Techniques**
Dr. Samad Abdus, *University of Limerick, Ireland*
- 16:40 - 17:05** **Title: Topology Optimization and Experimental Investigation of 3D-Printing Planar Steel Joints**
Xiaowei Deng, *University of Hong Kong, Hong Kong*
- 17:05 - 17:30** **Title: Effect of Gas Types (O_2 and N_2) on the Hydrogen Adsorption and Permeation Kinetics Process for Metals**
Dr. Lin Chen, *China University of Petroleum (Beijing), China*
- 17:30 - 17:55** **Title: Eco-Friendly Composite Development from Recycled Cement Paste Waste and Methylcellulose**
Ejazulhaq Rahimi, *Ritsumeikan University, Japan*

***** End of Day 1 *****

SCIENTIFIC AGENDA

DAY-2

28 February, 2025

In-person Conference

Day 2

09:00 - 09:30 Onsite Registration & Seating Arrangement

Keynote Presentations

9:30 - 10:00 **Title: Intelligent Development of Tribological Systems for High-Performance Applications**
Alois K. Schlarb, *Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau (RPTU), Germany*

10:00 - 10:30 **Title: Digital Twins for Accelerated Materials Innovation**
Prof. Surya R. Kalidindi, *Georgia Institute of Technology, USA*

Refreshment & Coffee - 10:30 - 10:50

Keynote Presentations Cont...

10:50 - 11:20 **Title: Harnessing Solar Energy through Plasmonic Nanomaterials**
Dr. Abul Azad, *Los Alamos National Laboratory, USA*

11:20 - 11:50 **Title: Atomic scale revelation of sites, elemental nature and dynamics of individual atoms, as well as of electric dipole configurations in materials envisaged for quantum device development**
Prof. Ursel Bangert, *University of Limerick, Ireland*

Oral Presentations

11:50 - 12:15 **Title: Nanostructured Thin Film Analysis of Perovskite Solar Cells Based on Water-Soluble Lead Precursor**
Gwomei Wu, *Chang Gung University, Taiwan*

12:15 - 12:40 **Title: Non-destructive evaluation technique for assessing nanoparticle dispersion in composite materials**
Prof. Antonio Pantano, *University of Palermo, Italy*

12:40 - 13:05 **Title: Crystal Plasticity of FCC Metals Under Friction in Steady and Instable States**
Prof. Lev S. Rapoport, *Holon Institute of Technology, Israel*

Memorable Group Photo & Tempting Buffet lunch - 13:05 - 13:50

Oral Presentations Cont...

13:50 - 14:15 **Title: Two-dimensional atomic site pattern for a four way symmetric tile and their inner structure**
Prof. Chung-Yuan Kung, *National Chung Hsing University, Taiwan*

14:15 - 14:40 **Title: Hydrogen Trapping Behaviour and Mechanisms of Carbides in Steels— an In Situ Investigation**
Prof. Binglu Zhang, *University of Science and Technology Beijing, China*

14:40 - 15:05 **Title: Effect and Mechanism of Y Burning Loss on the Corrosion Behavior of Rare Earth Ferrite-Martensite Steel Weldment in Liquid Lead-Bismuth Eutectic**
Ms. Wen Yao Li, *University of Science and Technology Beijing, China*

15:05 - 15:30

Title: Modeling Functional Surface for Additive Implant in Maxillofacial Surgery
Dr. Igor Vladimirovich Reshetov, *Sechenov University, Moscow, Russian Federation*

Refreshment & Coffee - 15:30 - 15:50

Poster Evaluation and Best Poster Awards - 15:50 - 16:35

MA251

Title: Graphene-Based Flexible Strain Sensor Optimization: Influence of Substrate Selection and Fabrication Techniques on Performance and Reliability
Naman Sandeep Naik, *Singapore American School, Singapore*

NW251

Title: Efficiency of Dry Wells Technology in Enhancing Water Circulation and Reducing Non-Point Source Pollution through Field Test
Tae-Yang Kim, *Pusan National University, Korea*

NW252

Title: Performance Analysis of Tree Filter Boxes for Stormwater Runoff Reduction through Empirical Testing
Jae-Myeong Choi, *Pusan National University, Korea*

NW253

Title: Application of Low Impact Development, a Green Technology for Watershed Water Cycle Management
Dr. Jae-Moon Kim, *Pusan National University, Korea*

NW254

Title: Analysis of the Superior Runoff Reduction Performance of Planter Box
Sang-Eon Lee, *Pusan National University, Korea*

NW255

Title: Study on the indoor heating effect of blue-green roofs in buildings during cold waves
Dr. Sung Min Cha, *Pusan National University, Korea*

NW256

Title: Investigation on reducing Non-point source pollutant by carbon based filter and permeable block
Dr. Yong-Ju Kwon, *Pusan National University, Korea*

***** End of Day 2 *****



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