



Theme:

“Unveiling the Latest
Advances in Materials
Science and Nanotechnology
Research.”

International conference on

Advanced Materials & Nanotechnology

**February 27 & 28, 2025 (In-Person)
March 1, 2025 (Virtual via Zoom)**

@ Room Garden 1
Ambassador Hotel Bangkok, Thailand

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: Potential application of innovative solid waste materials for adsorptive removal of toxic phenol from wastewater for ensuring cleaner environmental and also for generating circular economy**
Dr. Ashanendu Mandal, *University of Calcutta, India*

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 SiO₂-CaO-Na₂O- P₂O₅ 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 MoTe₂ 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 (O₂ and N₂) on the Hydrogen Adsorption and Permeation Kinetics Process for Metals**
Dr. Lin Chen, *China University of Petroleum (Beijing), China*

*** 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: Monoisotopic biology and biotechnology**
Prof. Roman Zubarev *Karolinska Institutet, Sweden*

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. Wenyao 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*

MA252

Title: Development of Green Composite from Cement Paste Waste and Methylcellulose Using Press Molding

Ejazulhaq Rahimi, *Ritsumeikan University, Japan*

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

SCIENTIFIC AGENDA

DAY-3

01 March, 2025

Virtual Conference

Day 3 - (Greenwich Mean Time)

08:50 - 09:00 Introduction & Opening Ceremony

09:00 - 9:30 Title: Supramolecular Nano Chemistry: Solving the Most Difficult Medical Problems
Prof. Thomas J Webster, Hebei University of Technology, China

09:30 - 10:00 Title: Determination of the Structure and Stoichiometry of the Asymmetrical Hexameric Revolving DNA Packaging Motor of phi29 As the Common Multiple of 2 and 3 With 12 Protruding to Bind the Channel
Peixuan Guo, The Ohio State University, USA

10:00 - 10:30 Title: Powder Based Additive Manufacturing of Polymers and Metallic Alloys
Dr. Urvashi Gunpath, University of Derby, UK

10:30 - 10:45 (Eye Relaxation Break & Breakout Rooms - Greenwich Mean Time)

Oral Presentations

10:45 - 11:10 Title: About Plane Non-stationary Problem of Interaction with Base with a Triangle Shape Welded Joint considering Martensites. Elastic Plastic Formulation
Dr. Vladislav Bogdanov, National Transport University, Ukraine

11:10 - 11:35 Title: KAGO: An Approximate Adaptive Grid Based Outlier Detection Approach using Kernel Density Estimate
Dr. Panthadeep Bhattacharjee, NIT Rourkela, India

11:35 - 12:00 Title: Prospects for Isotope Materials Science
Dr. Vladimir G Plekhanov, Fonoriton Science Lab, Estonia

12:00 - 12:15 (Eye Relaxation Break & Breakout Rooms - Greenwich Mean Time)

Keynote Presentations

12:15 - 12:45 Title: Polymernanotechnology: multicomponent nanomaterial integrative approach
Prof. Nekane Guarrotxena, Institute of Polymer Science and Technology, Spanish National Research Council (ICTP-CSIC), Madrid.

12:45 - 13:15 Title: Growth strategy of high quality single crystalline GaN nanowires by pulsed laser deposition for large-scale production
Prof. Iman Roqan, King Abdullah University of Science and Technology (KAUST), Saudi Arabia

13:15 - 13:45 Title: 30,000 Nano Orthopedic Implants Inserted into Humans: No Infections and No Failures and Still Counting

Prof. Thomas J. Webster, *Hebei University of Technology, China*

Oral Presentation

13:45 - 14:10 Title: IL27 fusion cytokines for targeted gene therapy applications

Dr. Marxa Figueiredo, *Purdue University, US*

Title: Synthesis of 2,3-Naphthalocyanine/ nickel hydroxide (2,3-Nc/Ni(OH)₂)

14:10 - 14:35 nanocomposite for electrochemical sensing of uric acid

Professor Omolola Esther Fayemi, *North-West University, South Africa*

Poster Presentation

14:35- 14:55 Title: Adsorption of C. I. Reactive Red 2 onto carbon nanotubes: determination of kinetics parameters

Prof. Chung-Hsin Wu, *National Kaohsiung University of Science and Technology, Taiwan*

14:55 - 15:15 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*

Plenary Presentations

15:15 - 16:15 Title: Wave scattering by many small particles, creating materials with a desired refraction coefficient and other applications

Prof. Alexander G. Ramm, *Kansas State University, United States*

***** End of Day 3 *****



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