



# Scientific Program

## 5th International Virtual Conference on Materials Science and Engineering

### December 12-13, 2025

Materials Science 2025 (Zoom Meeting)

Time Zone: GMT+1 (London, UK)

December 12, 2025

Time : 10:00 AM, London, UK Time

10:00-10:05

Opening Ceremony

Keynote Session

10:05-10:30

Title: Dental fluorosis and shear bond strength

Rim Kallala, Monastir University, Tunisia

10:30-10:55

Title: Improving the Fatigue Design of Mechanical Systems such as Refrigerator

Seongwoo Woo, Ethiopian Technical University, Ethiopia

10:55-11:20

Title: Single and Hybrid AMMC Nano Reinforcement

Wisam Alnahari, King Abdul Aziz University, Saudi Arabia

Plenary Speaker Session

Sessions

Current Concepts in Materials Science | Materials Science and Engineering | Nanomaterials and Nanotechnology | Electrical, Optical, and Magnetic Materials | Mining, Metallurgy and Materials Science

Session Chairperson

Wisam Alnahari, King Abdul Aziz University, Saudi Arabia

11:20-11:45

Title: Microstructure-Engineered Porous Cementitious Composites with Recycled Tire Particles: Orthogonal Optimization for Artificial Reef Applications

Wei Qiao, China University of Geosciences (Beijing), China

11:45-12:10

Title: Portable DNA Probe Detector and a New Dry-QCM Approach for SARS-CoV-2 Detection

Sanong Suksaweang, Suranaree University of Technology, Thailand

12:10-12:35

Title: Low Energy Buildings Design and Human Comfort Solutions

Abdeen Omer, Energy Research Institute (ERI), United Kingdom

12:35-13:00

Title: Efficient Synthesis of Peptoids from Dithiane Precursors via Multicomponent Reaction: A DFT-Based Mechanistic Insight

Musrat Shaheen, Government College University Faisalabad, Pakistan

13:00-13:25

Title: Eliminating Medical Device Infections without Antibiotics: 30,000 Patients and Counting

Thomas J. Webster, Brown University, USA

13:25-13:50	<b>Title: Nano-Composite Polymer Dampers: A Solution for Energy Absorption in Modern Concrete Design</b>
	<b>Sandhya R Jalgar, KLE Technological University, India</b>
13:50-14:00	<b>Refreshment Break</b>
14:00-14:25	<b>Title: Proposal of a New Atapulgitite-Based Fluid for Temporary Abandonment of Wells</b>
	<b>Ruth L N Gonçalves, Universidade Federal de Campina Grande (UFCG), Brazil</b>
14:25-14:50	<b>Title: Change of Coarse Aggregate Type's Impact on the Performance of Moderate and High Strength Concretes</b>
	<b>Salas Montoya Andres, National University of Colombia, Colombia</b>
14:50-15:15	<b>Title: Enhanced Volts-per-Hertz Sensorless Starting of Permanent Magnet Motor with Heavy Loads in Long-Cable Subsea Applications</b>
	<b>Virendra Singh, University of Houston, USA</b>
15:15-15:40	<b>Title: Defect And Microstructure Control Of Materials Using The Electron Wind Force</b>
	<b>Md Hafijur Rahman, Pennsylvania State University, USA</b>
15:40-16:05	<b>Title: Tackling Challenges: Exploring the Use of Natural Polymers in the Development of Anticorrosive Coatings</b>
	<b>Ana Alejandra Aguilar Ruiz, Instituto Tecnológico de Sonora, México</b>
16:05-16:30	<b>Title: A Comparative Analysis of Multi-Scale and Rayleigh Approaches in Capturing Eigenfrequencies and Mode Shape Evaluation in Planetary Gear Transmission Systems of Medium and Heavy Trucks</b>
	<b>Mahmoud Mabrouk, Hubei University of Automotive Technology China</b>
16:30-16:55	<b>Title: Pre-Trained Transformer-Based Models for Text Classification Using Low-Resourced Ewe Language</b>
	<b>Victor Kwaku Agbesi, University of Electronic Science and Technology of China, China</b>
16:55-17:20	<b>Title: Better Detection of Peripheral Arterial Disease with Toe-Brachial Index Compared to Ankle-Brachial Index among Taiwanese Patients with Diabetic Kidney Disease</b>
	<b>Chia-Wei Chang, Kaohsiung Medical University, Taiwan</b>
<b>End of Session</b>	
<b>Closing &amp; Award Ceremony</b>	
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