



# Scientific Program

**4th International Virtual Summit on Materials Science and Engineering**  
**July 17-18, 2026 | Online Conference**

**Materials Science 2026**

**July 17, 2026**

**Time: 10:00 AM | Online Conference | Time Zone: GMT+1 (London, UK)**

**10:00-10:05**

**Opening Ceremony**

## **Keynote Speaker Session**

**10:05-10:30**

**Title: AEGD-Assisted Plasma Nitriding of AISI M2 Steel: Influence of Treatment Time on Structure and Scratch Resistance**

**Juan Manuel González Carmona, Center for Engineering and Industrial Development, Mexico**

**10:30-10:55**

**Title: Effect of process parameters on aspect ratio, microstructure and mechanical properties of multi-layer walls fabricated by SAAM**

**Víctor García García, Technological Institute of Morelia, Mexico**

**10:55-11:20**

**Title: Sulfated Chitosan Induces Membrane Disruption, Aggregation, and Antibiofilm Activity in *Piscirickettsia salmonis*: A Biomimetic Strategy as an Antimicrobial Alternative in Aquaculture**

**Darwain Arrieta Mendoza, Faculty of Veterinary and Animal Sciences, University of Chile**

**11:20-11:45**

**Title: Enhanced Efficiency of CZTS Solar Cells with Reduced Graphene Oxide and Titanium Dioxide Layers: A SCAPS Simulation Study**

**Darwain Arrieta Mendoza, Hassan II University, Morocco**

## **Plenary Speaker Session**

**Sessions**

**Materials Science and Engineering | Electrochemistry | Industrial Chemistry & Applied | Materials Chemistry | Magnetic Materials | Graphene and 2D Materials**

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| <b>Session Chairperson</b> | <b>Socratis Thomaidis, National and Kapodistrian University of Athens, Greece</b>                                               |
| <b>11:45-12:10</b>         | <b>Title: Taxonomic Exploration of Healthcare IoT: Challenges, Solutions, and Future Frontiers</b>                              |
|                            | <b>Lutifa Alashlam, Institute of Graduate Research and Studies, Libya</b>                                                       |
| <b>12:10-12:35</b>         | <b>Title: The Hardware Isolation Gap: A Systematic Survey of BitLocker Forensics in the TPM 2.0 Era</b>                         |
|                            | <b>Vinay Kumar Sankalagere Ramesh, PES University, India</b>                                                                    |
| <b>12:35-13:00</b>         | <b>Title: A Novel Organic–Inorganic-Nanocomposite-Based Reduced Graphene Oxide as an Efficient Nanosensor for NO2 Detection</b> |
|                            | <b>Pooya Gholami, Petroleum and Gas Eng, Semnan University, Iran</b>                                                            |
| <b>13:00-13:25</b>         | <b>Title: Advances towards environmental sustainability in cellulose-derived battery separators</b>                             |
|                            | <b>Tayse Circe Turossi, University of Caxias do Sul, Francisco Getúlio Vargas St., Brazil</b>                                   |
| <b>13:25-13:50</b>         | <b>Title: Solving a weather-sensitive inventory model using Goat search algorithm and Oyster collection algorithms</b>          |
|                            | <b>Suman Maity, Raja Narendra Lal Khan Women’s College, W.B., India</b>                                                         |
| <b>13:50-14:15</b>         | <b>Title: Estructuras vulnerables ante movimientos sísmicos</b>                                                                 |
|                            | <b>Yessica Zuleika Vargas Atencio, Miviot/Sistema Nacional de Protección Civil, Panama</b>                                      |
| <b>14:15-14:40</b>         | <b>Title: Seeing is believing: Unraveling Gold Nanoparticles Genotoxicity via 4DAtomic Force Microscopy</b>                     |
|                            | <b>Hosam Gharib Abdelhady, Sam Houston State University, USA</b>                                                                |
| <b>14:40-15:05</b>         | <b>Title: IDBspRS: An Interior Design-Built Service Package Recommendation System using Machine Learning</b>                    |
|                            | <b>Pranabanti Karmaakar, Sheffield Hallam University, UK</b>                                                                    |
| <b>15:05-15:30</b>         | <b>Title: Solving Inhomogeneous Constant Coefficient Ordinary Differential Equations Using Artificial Neural Networks</b>       |
|                            | <b>Carine Ornela Megne Nono, international centre for theoretical physics (ictp), Italy</b>                                     |
| <b>15:30-15:55</b>         | <b>Title: Large Language Models Utility for Rapid On-Site Evaluation in Interventional Pulmonology</b>                          |
|                            | <b>Lev Freidkin, Tel Aviv University, Israel</b>                                                                                |
| <b>15:55 - 16:20</b>       | <b>Title: In-Situ Remediation of Heavy Metal–Contaminated Sediments Using the Resuspension Technique</b>                        |
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|                                                                                                                                                                                    | Masoumeh Javid, Concordia University, Canada                                                                                                                                                                                                           |
| 16:20-18:00                                                                                                                                                                        | Poster Speaker Session                                                                                                                                                                                                                                 |
| P001                                                                                                                                                                               | <p>Title: Comparative Studies on Grain Quality and Pesticide Residues in Maize Stored in Hermetic and Polypropylene Storage Bags</p> <p>Samuel Kofi Nyarko, University of Science and Technology, Ghana</p>                                            |
| P002                                                                                                                                                                               | <p>Title: Insights into the Corrosion Inhibition Performance of Isonicotinohydrazide Derivatives for N80 Steel in 15% HCl Medium: An Experimental and Molecular Level Characterization</p> <p>Abdelkarim Ait Mansour, University Ibn Zohr, Morocco</p> |
| P003                                                                                                                                                                               | <p>Title: Humanistic AI Architecture™:Using Healthcare AI to Enhance Human-Centered Care</p> <p>Alan Kwong Hing, PBM Healing International, China</p>                                                                                                  |
| P004                                                                                                                                                                               | <p>Title: A Hybrid Planning–Learning Framework for Autonomous Navigation with Dynamic Obstacles</p> <p>Hatice Arslan Öztürk, Yıldız Technical University, Istanbul, Türkiye</p>                                                                        |
| P005                                                                                                                                                                               | <p>Title: Artificial Intelligence Adoption in Latin American SMEs: Resilience and Sustainability in Uncertain Business Environments</p> <p>Flor Ximena Poveda Valverde, Universidad Estatal de Bolívar, Ecuador</p>                                    |
| Closing & Award Ceremony                                                                                                                                                           |                                                                                                                                                                                                                                                        |
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