



2nd International Summit on
**MATERIALS
SCIENCE &
ENGINEERING**

September 14 & 15, 2026 (In-Person at Budapest) &
September 16, 2026 (Virtual Zoom Platform)

Theme:

“Materials Shaping the Future: From
Fundamentals to Frontier Technologies”

Tentative Agenda

Introduction & Opening Ceremony

LAST UPDATED ON 9th APRIL 2026

Keynote Presentation

Prof. Lev S. Rapoport	<i>Holon Institute of Technology, Israel</i>	Crystal Plasticity of FCC Metals Under Steady-State and Instable Friction
Prof. Bun Tsuchiya	<i>Meijo University, Japan</i>	Hydrogen Absorption and Desorption Characteristics of Li_xCoO_2 Positive Electrode Materials in Li^+ Ion Rechargeable Batteries
Prof. Tohru Higuchi	<i>Tokyo University of Science, Japan</i>	Clean Energy Device Using Oxide Superionic Conductor Solid Electrolyte Thin Film Laser Shock Processing: An
Dr. José L. OCAÑA	<i>Universidad Politécnica de Madrid, Spain</i>	Advanced Technique for the Enhancement of the Fatigue Life and Mechanical Performance of Strategic Metallic Materials
Prof. Joseph H. Koo	<i>The University of Texas at Austin, USA</i>	Novel Fiber-Reinforced Polysiloxane Composites for Extreme Aerospace Applications
Prof. Jacob Gavan	<i>Holon Institute of Technology, Israel</i>	Power Beaming for Commercial Solar Energy and Defense Applications
Prof. Yukiharu Uraoka	<i>Nara Institute of Science and Technology, Japan</i>	High Performance Metal Oxide Thin Film Transistor using ALD Method
Prof. Win-long Chia	<i>Fu Jen Catholic University, Taiwan</i>	A Lifetime on Synthesis of Nitrogen-Containing Liquid Crystals in Taiwan
Prof. Show-An Chen	<i>National Tsing Hua University, Taiwan</i>	Molecular Design on Semiconductive Polymers for Opto-Electronics Interconversion with High Device Performance
Prof. Cristina SATRIANO	<i>University of Catania, Italy</i>	Multipurpose Hybrids Beyond Graphene with Plasmonic Nanoparticles and Magnetite for Theranostics and Sustainable Environmental Applications
Prof. Masahiro Miyauchi	<i>Institute of Science Tokyo, Japan</i>	Semiconductor-Based Photocatalyst for Gas-Phase CO_2 Reduction
Dr. Sven Simon	<i>University of Stuttgart, Germany</i>	The AI Revolution in Laboratory and Synchrotron X-ray Computed Tomography
Prof. Andrea Lamberti	<i>Politecnico Di Torino, Italy</i>	Electrochemistry at the Nanoscale: Powering Sustainable Energy Harvesting and Storage for Industrial Applications
Prof. Brigita Rožič	<i>Jožef Stefan Institute, Slovenia</i>	Liquid Crystal-Based Caloric Materials for Green Cooling Technologies

Prof. Benigno Rodriguez Diaz	<i>Universidad de la República, Uruguay</i>	The Design of More Efficient Antennas as a Strategy for Climate Change Mitigation
Prof. Anita-Ioana Visan	<i>National Institute for lasers, plasma and radiation physics, Romania</i>	Bioinspired and Biomimetic Nanomaterials as Coatings for Advancing Nanomedicine
Prof. Irina Negut	<i>National Institute for lasers, plasma and radiation physics, Romania</i>	Thin Films deposited by Matrix-Assisted Pulsed Laser Evaporation for Tissue Engineering Applications
Mr. Albin Kälin	<i>CEO epeaswitzerland gmbh, Switzerland</i>	Cradle to Cradle Design Innovations
Prof. Junhui Hu	<i>Nanjing University of Aeronautics & Astronautics, China</i>	Ultrasonic Enhancement and Fabrication of Gas Sensors
Prof. Jiandong Guo	<i>Chinese Academy Of Sciences, China</i>	Growth of Ultrathin CrxTey Films and Their Magnetism in the Two-Dimensional Limit
Prof. Tatiana E. ITINA	<i>CNRS, Université Jean Monnet, France</i>	From Ultrafast Laser Excitation to Functional Nanomaterials: Multiscale Insights
Prof. Changguo Wang	<i>Harbin Institute of Technology, China</i>	Thermal Nonreciprocity in Wrinkled Graphene
Prof. Zhengjun Zhang	<i>Tsinghua University, China</i>	From Ultrafast Laser Excitation to Functional Nanomaterials: Multiscale Insights
Dr. Héctor Hugo Pérez Garza	<i>DENS solutions BV, The Netherlands</i>	Next-Generation Environmental In Situ System for Correlative Research Across TEM, SEM, and Synchrotrons
Prof. Jiong Zhou	<i>Northeastern University, China</i>	Macrocycle Co-Crystal Materials
Prof. Yoed Tsur	<i>Technion, Israel</i>	The Doping Factor Approach in Solid State Ionics
Prof. Olivier BONNAUD	<i>University of Rennes, France</i>	The Future of Higher Education in Microelectronics and Nanotechnology in the Evolving Digital World: Role of the Materials
Prof. Cong Wang	<i>Beihang University, China</i>	Strain Regulation of the Magnetic Structures and Properties in Antiperovskite Antiferromagnetic Mn₃XN(C) Compounds
Prof. Mineo Hiramatsu	<i>Meijo University, Japan</i>	Engineering Three-Dimensional Graphene Architectures by Plasma Processes for Advanced Carbon Materials
Prof. Gerard Tobías Rossell	<i>Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Spain</i>	Tubular One-Dimensional van der Waals Heterostructures

Prof. Anelie Petrissans	<i>Université de Lorraine, France</i>	Wood Torrefaction: An Innovative Production of Sustainable Material. Influencing Factors and Scale up From Laboratory to Industrial Process
Dr. Michael Zharnikov	<i>Heidelberg University, Germany</i>	New Aspects of Electrostatic Engineering of Surfaces and Interfaces
Prof. Rie Umetsu	<i>Tohoku University, Japan</i>	Magnetic Properties and Energy State of Half-Metallic Co-based Heusler Alloys
Dr. Yuhu Zhai	<i>Princeton Plasma Physics Laboratory, USA</i>	Fusion Materials Needs to Mature Enabling Technologies for Energy and Science

Oral Presentation

Assoc. Christl Lauterbach	<i>Future-Shape GmbH, Germany</i>	A Smart Textile Underlay providing a Large-Area Sensor Floor
Dr. Hiroyuki Aoki	<i>Japan Atomic Energy Agency, Japan</i>	Interface Engineering to Enhance Adhesion Strength in High Humidity Systemic Blood Changes in Skin Hyperpigmentation. Correction Possibilities
Prof. Maria Glushkova	<i>Rostov State Medical University, Russia</i>	Carbon Materials: Synthesis Pathways from Nonporous to Microporous Carbon Adsorbents Derived from Molasses for CO₂ Removal Applications
Prof. Karolina Kiełbasa	<i>West Pomeranian University of Technology in Szczecin, Poland</i>	Double-Double: A Revolutionary Laminate Theory
Prof. Stephen W Tsai	<i>Stanford University California, USA</i>	Importance of Exposure Assessment Along Life Cycle of Nanocomposites Optical, Photocatalytic, and Antibacterial Properties of Sol-Gel Derived Fe Doped SrTiO₃ Powders
Mr. Gunther Van Kerckhove	<i>OCSiAl Group, Luxembourg</i>	Doing Better Than Nature: Use of Synthetic Antibacterial Copolymers (SACs) Mimicking Natural Antimicrobial Peptides (AMPs) to Confer Antimicrobial Properties to Materials.
Prof. Iliana A Ivanova	<i>Sofia University, St. Kliment Ohridski, Bulgaria</i>	High-Performance Polymers and Composites for Advanced Engineering Integrating 2D MoS₂ FETs with PVDF Triboelectric Layers for Next-Generation Artificial Sensory Systems
Dr. Maresca Marc	<i>Aix Marseille University, France</i>	Synergizing Multiphysics Simulation and Machine Learning for Data-Efficient Process Optimization of 7075 Aluminum Alloy in LPBF
Dr. Shuji Ogata	<i>Nagoya Institute of Technology, Japan</i>	
Dr. Shijeesh M. Raman	<i>Universidad Politécnica de Madrid, Spain</i>	
Ms. Cai-Jhen Hsu	<i>National Center University, Taiwan</i>	

Prof. José Paulo Barbosa Mota *NOVA University Lisbon, Portugal*

Evaluation of Optimal Porous Nanomaterials for Low-Temperature, Vibration-Free Cryocoolers

Dr. Peter Gyarmati *Stanford University, USA*

The Gauss's Theorema Egregium-The Importance of Non-Euclidean Geometry

Prof. Jiaxin Cai *Xiamen University of Technology, China*

Later Temporal Attention in Computer Aided Medical Diagnosis

Prof. Haiming Luo *Hainan University, China*

Sensitive Detection of Multiple Blood Biomarkers via Immunomagnetic Exosomal PCR for the Diagnosis of Alzheimer's Disease

Dr. George Sawatzky *Soochow University, China*

Towards an Understanding of The Exotic Properties of 3d Transition Metal and Rare Earth Compounds

Prof. Silvete Coradi Guerini *Federal University of Maranhão, Brazil*

Advances In High-Voltage Consolidation of Powder Materials

Dr. Abhishek Srivastava *University of Freiburg, Germany*

Autonomous Chemical Sensing via Buckling in Responsive Microfluidic Membranes

Ms. Chia-Chien Chen *National Central University, Taiwan*

Improving Ru Catalysts for PEMWE: Multi-element Modulation and Stability Enhancement for Green Hydrogen Production

Oral Presentation

Prof. Angyang Yu *Harbin Institute of Technology, China*

Doping Effects on Hydrogen Storage Properties of Graphene

Ms. Chia-Ying Tsai *National Central University, Taiwan*

Development of Green Recycling Technology for Lithium-Ion Battery Cathode Materials and Its Application in Water Electrolysis Catalysts

Prof. Adelhamid El kaaouachi *Faculty of Sciences Ibn Zohr of Agadir, Morocco*

Magnetoconductivity Behaviour Due to Electron–Electron Interactions, Weak Localization and Zeeman Effects in 2-D-layered WS₂

Prof. Masatoshi Shimoda *Toyota Technological Institute, Japan*

Topology Optimization with Optimized Design Domain for Designing Biologically Derived Microstructures

Prof. Xie Quan *Dalian University of Technology, China*

Engineering Single-Atom Catalysts for Advanced Electro-Fenton Processes in Water Purification

Zahir Sayyed *Vmware, US*

Development of a Simulator to Mimic VMware vCloud Director (VCD) API Calls for Cloud Orchestration

Prof. Arthur J. Nozik *University of Colorado, Boulder*

Climate Change & Renewable Energy: Science, Technology, Economics, & Reality; and Advanced Concepts for Highly Efficient Solar Photon Conversion into Photovoltaics & Fuels Based on Quantization Effects in Nanostructures & Molecular Singlet Fission

Dr. Slavik Avagyan *National Polytechnic University
of Armenia, Armenia*

**Topology Optimization with Optimized
Design Domain for Designing Biologically
Derived Microstructures**

**Assoc. Nikola
Biliškov** *Ruđer Bošković Institute, Croatia*

**How Solid-State Reactions Work from
Mechanochemistry to Contact Reactions**

**Prof. Hajime
Shirai** *Saitama University, Japan*

**Electrostatic Rectification of Li⁺ Transport
in Amorphous TiO_x Thin Films Grown by
Mist CVD**

*****Speaker Slots Available*****

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Poster Presentation

**Dr. Constantinos
Sioutas** *University of Southern California,
USA*

**Electrostatic Enhancement of the
Collection Efficiency of Stainless-Steel
Filters**

**Mr. Ricky Yu-
Syun Fan** *National Taiwan University, Taiwan*

**The Modification of Metallic Organic
Framework Material and its Application on
Electrocatalysis and Lithium-ion Storage**

**Ms. Emelia Sim
Eng Zhi** *National Taiwan University, Taiwan*

**Ni–Co Prussian-Blue-Analogue–Derived
Porous Oxides Show Dose-Dependent
Antibacterial Activity Against Escherichia
coli**

**Hussein Fawzi
Hussein** *Scientific Research Commission,
Baghdad, Iraq*

**Effect Of Nitride Time on the Mechanical
Properties for the (Ti6Al4V) and
(Ti6Al7Nb) Alloys for using Medical
Applications**

**Dr. Bachir Bachir
Bouiadjra** *Electromechanical department
University of Oran2 Mohamed Ben
Ahmed, Algeria*

**Fabrication, Biocompatibility, and
Therapeutic Applications**

Dr. Chang Su Woo *Korea Institute of Machinery &
materials, Rep.of Korea*

**Characteristic Analysis of Rubber
Components**

Dr. Wei-Hsuan Hung *National Central University,
Taiwan*

**Advanced Oxygen Evolution High Entropy
Carbonate Electrocatalyst for Application
of Anion Exchange Membrane Seawater
Electrolyzer**