

Tentative Program

5th International Conference on



MATERIALS SCIENCE AND ENGINEERING

Dates

June 10-12, 2024 | San Francisco, CA





Venue

DoubleTree by Hilton
San Francisco Airport, 835 Airport Blvd,
Burlingame, CA 94010, United States




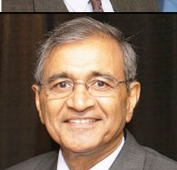
Program Last Updated on: **April 02, 2024**

Last minute changes due to functional, private, or organizational needs can be necessary. The event organizer accepts no liability for any additional costs caused by a change of program. **Program is subject to change**

Plenary Presentations | 35 Minutes

	<p>Semiconductor Quantum Science and Technology for Optoelectronics Devices from Deep UV to THZ Manijeh Razeghi, Northwestern University, Evanston, IL</p>
	<p>Title To Be Announced Miquel Salmeron, Lawrence Berkeley National Laboratory & University of California, Berkeley, CA</p>
	<p>3D/4D Printing of Nanostructured Polymer Materials and AI/ML Strategies Rigoberto C. Advincula, University of Tennessee, Knoxville, TN</p>
	<p>Superior High-temperature Strength in a Refractory High-entropy Alloy Peter K. Liaw, University of Tennessee, Knoxville, TN</p>

Keynote Presentations | 30 Minutes

	<p>Multi-scaled Biomaterials to Regulate Stem Cells and Tissue Regeneration Peter X. Ma, University of Michigan, Ann Arbor, MI</p>
	<p>Title To Be Announced Prashant N. Kumta, University of Pittsburgh, Pittsburgh, PA</p>
	<p>Heterogeneous Materials: Microstructure-property Connections and Cross-property Relations Mark Kachanov, Tufts University, Medford, MA</p>
	<p>Solar Harvesting Through Multiple Transparent Cadmium Telluride Solar Panels for Collective Energy Generation Donglu Shi, University of Cincinnati, Cincinnati, OH</p>
	<p>Lessons from Nature: Bioinspired Mechanically Durable and Self-healing Superliquiphilic/phobic Surfaces Bharat Bushan, The Ohio State University, Columbus, OH</p>

Oral Presentations | 20 Minutes

Density functional Theory Calculations on Erbium and Praseodymium-doped Lithium Tantalate Compounds

Nicholas Dimakis, University of Texas Rio Grande Valley, Edinburg, TX

Biologically Inspired Mechanical Reinforcement of Plastic Bonded Explosives

Matthew J Herman, Los Alamos National Laboratory, Los Alamos, NM

Surface Treatment of Medical Devices: Enhancing Biocompatibility and Bioactivity

Craig Rosenblum, Himed, Old Bethpage, NY

Impact Resistance of Thermoplastic Composites

Beckry Abdel-Magid, Winona State University, Winona, MN

Functional Materials and Their Synthesis using of In-liquid Plasma Method

Chiaki Terashima, Tokyo University of Science, Japan

Glass/Aluminum Alloy Weld by Laser Transmission Welding

Jeng-Rong Ho, National Central University, Taiwan

Evaluation of Fatigue and Wear characteristics of Pure Titanium Surfaces by Energy-Intensive Multifunction Cavitation Treatment

Masataka Ijiri, Tokyo Metropolitan University, Japan

Effects of Heterogeneous Nucleation Site Particles on Microstructure and Mechanical Properties of Additively Manufactured Metal and Alloys

Yoshimi Watanabe, Nagoya Institute of Technology, Japan

Enhancing the Performance of Flexible and Wearable Zinc-Ion Batteries through 3D-Printable Polymer Electrolytes

Chuanchom Aumnate, Chulalongkorn University, Thailand

Origin of Life in a High Potassium Environment between Mica Sheets in Micaceous Clay

Helen Greenwood Hansma, University of California, Santa Barbara, CA

Significance of Non-uniform Heat Source on the Carreau Bio-nanomaterial Emhd Flow: Modified Buongiorno Approach for Biomedical Applications

Wenwu Xu, San Diego State University, San Diego, CA

Abnormal Dynamic Strain Aging and Negative Strain Rate Sensitivity in Coarse-grained Al_{0.3}CoCrFeNi High Entropy Alloy Under Hot Compression

Kwangtae Son, Oregon state University, Corvallis, OR

Machine learning-based design method for acoustic metamaterials

Wenjing Ye, Hong Kong University of Science and Technology, Hong Kong

The Effect of Antimony Additions on the Microstructure and Performance of Automotive Zn-Al-Mg Steel Coatings

Syed Mansoor Ali, King Saud University, Saudi Arabia

Numerical Model and Computer Code for Online Prediction of Residual Stresses in Hot Rolled Profiles Considering Phase Transformations in Steel

Andrij Milenin, AGH University of Krakow, Poland

Metal Oxide-Based Photocatalysts and Photoelectrodes

Go Kawamura, Toyohashi University of Technology, Japan

Metal Oxide Nanostructures for Heavy Metal Mitigation

Wai Kian Tan, Toyohashi University of Technology, Japan

Experimental and Modeling Challenges in the Computer-Aided Engineering of Polymers
Michael Johlitz, Institute of Mechanics, Germany

Development of Injectable and Thermoresponsive Hyaluronic acid-HDI/PF127 Hybrid Multi-Functional Hydrogel for Improved Diabetic Wound Healing
Yu-Hsiang Lee, National Central University, Taiwan

Investigation of phase transitions in a metastable Ti alloy
Miloš Janeček, Charles University, Czech Republic

Aqueous corrosion fatigue of HVOF-WC/Co coatings deposited on top of laser peened or shot peened 300M steel
Juan Carlos Nava, Curtiss-Wright Surface Technologies, Tracy, CA

Plastic deformation: From macro to micro scales
Michal Knapěk, Charles University, Czech Republic

Intriguing High-Temperature High-Magnetic-Field Phase Boundary due to Valence Transition in CeO₃Sb₁
Pei Chun Ho, California State University, Fresno, CA

Beyond Lotus Leaves: Deformable Super-repellent Surfaces with High Mechanical Resilience
Tingyi Leo Liu, University of Massachusetts Amherst, Amherst, MA

Phytoremediation using nanoscale Zerovalent iron (nZVI) and mangroves for decontamination process
Keyla Soto Hidalgo, University of Puerto Rico, San Juan, PR

Glass composition for coating and bonding of polycrystalline spinel ceramic substrates
Jacob Hormadaly, Ben Gurion University, Israel

Advances in Diffusion Barrier Coatings for High-Temperature Applications
Toshio narita, DBC System R&D Co., Ltd., Japan

Three important temperatures in silica glass transition
Shangcong Cheng, Molecular Foundry of Lawrence Berkeley National Lab, Berkeley, CA

Water and energy sustainability via thermoresponsive hygroscopic acrylamide gel: Synthesis and water release kinetics
Nasrollah Hamidi, South Carolina state University, Fresno, CA

Experimental feasibility study for radiofrequency heated set-up for CO₂ capture with calcium looping
Javier Fernandez Garcia, IQS SCHOOL OF ENGINEERING, Spain

AlTiSi (+Cr)N nano-structured coatings synthesized by HIPIMS for harsh environment applications thanks to high-thermal mechanical and oxidation coating properties
Choquet Patrick, Luxembourg Institute of Science and Technology, Luxembourg

Development of High Strength and High Stress Corrosion Cracking Resistant Al-Zn-Mg(Cu) Alloy
VS RAJA, Indian Institute of Technology Bombay, India

Precise Tumor pH-Functionalized Nanoparticles for Tailored Oxaliplatin and miRNA Delivery in Cancer Treatment
Yu-Li Lo, National Yang Ming Chiao Tung University, Taiwan

Computation-Aided Design of Energy Materials
Jyh-Chiang Jiang, National Taiwan University of Science and Technology, Taiwan

Environmentally Friendly Processing of Bulk Nanoporous Materials
Mark Atwater, Liberty University, Lynchburg, VA

Evolution of wear in binary titanium aluminum nitride coatings applied to cemented tungsten carbide pins dry sliding on hardened steel discs

Abhijit Bhattacharyya, Mahindra University, India

Synthesis of Low-Order Iron Oxide Nanoclusters: High-Performance Magnetic Bioimaging with Small Molecule Clearance Kinetics

Christopher J. Butch, Nanjing University, China

Semiconductor moiré structures and their novel electronic transport properties

Ning Wang, Hong Kong University of Science and Technology, Hong Kong

Energy-Efficient Electrified Reactive Capture via Engineering of Pore Radius and Penetration Depth in the Catalyst Support

Ke Xie, Northwestern University, Evanston, IL

Thermal and microstructural assessment of dissimilar joints between twinning-induced plasticity steel and austenitic/duplex stainless steels: numerical and experimental analysis

Victor Garcia Garcia, National Technological Institute of Mexico

Mimicking Tumors as a S.M.A.R.T.E.R. Way to Treat Transplant Rejection and Inflammatory Diseases

Steven R. Little, University of Pittsburgh, Pittsburgh, PA

A Proposed Mechanism for Bubble Formation in Quartz Glass

Rafik Ayvazyan, Hayward Quartz Technology Inc., Fremont, CA

Derivation of Layer Composition of Cemented Carbide Layer Formed by Directed Energy Deposition using Bayesian Optimization

Yorihiro Yamashita, National Institute of Technology, Japan

High performance composite for hydrogen storage

Lyazid Bouhala, Luxembourg institute of science and technology, Luxembourg

Color Control of Electrochromes by Structural Modification

Will Skene, University de Montreal, Canada

Xenopericardial are the most select sourcing to manufacture percutaneous heart valves

Robert Guidoin, University of Laval, Canada

3D Printing of Glass Optics: Shaping the Future of Precision Optical Systems

Rongguang Liang, University of Arizona, Tucson, AZ

Hydrogen-induced cracking - differentiation between damage mechanisms in high-strength spring steel wires using acoustic emission

Mathias Lorenz, Hochschule Wismar, Germany

A novel nanocarrier for targeted therapy of anxiety and depression diseases

Neeraja Revi, University of Illinois at Chicago, Chicago, IL

Capturing inelastic scattering processes in electron and ion irradiated materials

David B. Lingerfelt, Oak Ridge National Laboratory, Oak Ridge, TN

Approach for Non-Destructive Disassembly of Bonded CFRP Structures

Janko Kreikemeier, German Aerospace Center, Germany

Dynamic Interfacial Mechanisms of Cathode Lithium Cobalt Oxide under Varying Potential Conditions by Electrolyte Additive and Artificial Layer

Meihua Hong, Sungkyunkwan University, South Korea

Electrochemical performance of Mo-doped LiNiO₂ cathodes for Lithium-Ion Batteries

Misbah Mumtaz, University of Sheffield, UK

Atomic Layer Deposition: Pursuit for the Nano Precision
Tien-Chien Jen, University of Johannesburg, South Africa

Epidemics on large networks
Oanh Nguyen, Brown University, Providence, RI

Platinum and carbon free multi-elemental nanostructures as novel catalyst- support conjugate materials in Fuel Cell catalysis
Jayati Datta, Heritage Institute of Technology, India

Synergetic effect of alloying elements content and heat-treatment on mechanical properties and high temperature oxidation behavior of NiCoCrAlFe-based high entropy alloys
Wojciech J. Nowak, Rzeszow University of Technology, Poland

Intelligent Millimeter-Wave System for Human Activity Monitoring for Telemedicine
Abdullah K. Alhazmi, University of Dayton, Dayton, OH

Laser ablation-induced microelectrodes in perovskite and perovskite/silicon tandem solar cells
Kavya Keremane, Penn State University, University Park, PA

Antibacterial activity of metal oxides nanoparticles and thin films
Rabah AZOUANI, School of Industrial Biology, France

Atomistic modeling of Li-rich Mn-rich layered oxide cathode materials
Hakim Iddir, Argonne National Laboratory, Hoffman Estates, IL

Nanoscale Porosity Characterization of Tough and Conductive Double-Network Hydrogels for Multifunctional Sensors
Maryam Mobed-Miremadi, Santa Clara university, Santa Clara, CA

Characterization of TaOx-based Memristor Devices Integrated with an NMOS Transistor in a 1T1R Configuration
Sangwook Sihm, University of Dayton Research Institute, Beavercreek, OH

Harnessing the Potential of Y2W3O12 to Advance Thermal Expansion Engineering
Hagay Hayun, Ben gurion university, Israel

Functional Liposomes and Microfluidic Mixers
Ion Stiharu, Concordia University, Canada

Superconductor Exclusion Principle for Identifying a Room Temperature Ambient Pressure Superconductor
Yong-Jihn Kim, University of Puerto Rico, Mayaguez, PR

Recycling of galvanic sludge for the production of materials for the ceramic industry
Brian Felipe Mendez Bazurto, Universidad Nacional de Colombia, Colombia

High-performance electrodes by 3D printing for hydrogen generation
Jun Ding, National University of Singapore, Singapore

The ExB Thermoelectric Effect Optimized for Solid State
George Samuel Levy, Entropic Power, USA

Biologically Inspired Mechanical Reinforcement of Plastic Bonded Explosives
Matthew J. Herman, Los Alamos National Laboratory, Los Alamos, NM

Poster Presentations

Additively Manufactured Steel with TWIP Effect and Enhanced Corrosion Resistance
Pavel Podany, COMTES FHT a.s., Czech Republic

Development of wire manufacturing technology for titanium and nickel shavings
Michal Duchek, COMTES FHT a.s., Czech Republic

Optical and structural characterization of p-type and n-type GaAs thin films via magnetron sputtering technique

Sofia Hoyos Restrepo, Universidad Nacional de Colombia, Colombia

Lanthanum Doped Magnesium Stannate Nano-Crystallites Based Photo- Anode for Dye-Sensitized Solar Cell

Ramesh Kumar, National Institute of technology Kurukshetra, India

Evaluating Biocompatibility and Anti-Angiogenesis Efficiency of Anti-Integrin PEG-b-PPS Micelles in Danio rerio Diabetic Retinopathy model

Aishwarya Gangadhar, University of Illinois at Chicago, Chicago, IL

Gold Anchored-Tryptamine Nanoliposomes (Trpn-Au-Lipo): An anti-inflammatory and anti-amyloidogenic nanomaterial for the treatment of Alzheimer's Disease

Sakshi Jain, University of Illinois at Chicago, Chicago, IL

Effect of Carbonized Hulls and Calcifying microorganism on particulate matter removal

Seokhyun Chin, Choate Rosemary Hall, Wallingford, CT

Synergistic Effects of Ca and Co Co-Doping on Barium Hexaferrite: A Computational Study in Magnetic Materials

Abdalla Obeidat, Jordan University of Science and Technology, Jordan

Synthesis and characterization of nanoparticles of NiMo prepared by Microwave method in supports of ZnO evaluated in Hydrotreating of light gas oil

Nancy Castillo, National Polytechnic Institute, Mexico

Study of the Structural, Optical, and Electrical Properties of Polyethylene Oxide/ Polyvinylidene Fluoride (PEO/PVDF) Blend Dispersed with Silver Oxide (Ag₂O) Nanoparticles as an Advanced Multifunctional Matrix for Flexible Electronic Devices

Lamiaa G Alharbe, Umm Al-Qura University, Saudi Arabia

Mechanical tensile and Fatigue Behavior of Carbyne and Carbyne-C18 Nanostructures: A Molecular Dynamics Study in Vacuum and Water Environments

Milad Sangsefidi, University of Arkansas, Fayetteville, AR

Title To Be Announced

Wenfang Sun, The University of Alabama, Tuscaloosa, AL

Shunyu Liu, Clemson University, Greenville, SC

Pradeep Rohatgi, University of Wisconsin, Milwaukee, WI

Peisheng Xu, University of South Carolina, Columbia, SC

Stefanie Klein, University of Erlangen, Germany

Tereza Paronyan, HeXalayer, LLC, Louisville, KY

Paul Wood, The University of Derby, UK

Juras Banys, Vilnius University, Lithuania

Mamidanna Sri Ramachandra Rao, Indian Institute of Technology (IIT) Madras, India

Julia Applegat, Santa Clara University, Santa Clara, CA

Ryan Lang, Santa Clara University, Santa Clara, CA

Megan Moglia, Santa Clara University, Santa Clara, CA

Lei Xu, The Chinese University of Hong Kong, Hong Kong

Boyer Severine A.E, Mines Paris, France

Choon Y. Lee, Central Michigan University, Mount Pleasant, MI

Alex Chortos, Purdue University, West Lafayette, IN

Matthew Chang, Clarivate, Malvern, PA

Benjamin Savitzky, h-Bar Instruments, Pawtucket, RI

Wei Yu Wei, Luoyang Kechuang New Materials Co. Ltd, Canada

Presentation Slots Available!!!
