

7:30	Registration and Exhibition-			
8:30-9:30	Career Perspectives Session, Exhibition & Continental Breakfast -			
Room	Sierra 1	Sierra 2	Sierra 3	Ocotillo 2
Session	Synthesis, preparation, measurements and properties	Electronics, Magnetics and Photonic Materials & Devices	Advanced and Printed Manufacturing	AI/ML in Materials Science
Chair	Bobbitt	Fowler	Appelhans	Shanti
9:30	High-Throughput Synthesis of High-Entropy Metal-Organic Frameworks for Chemical Warfare Agent Remediation, <i>Siu</i>	Identifying a Novel Gate-Drain Leakage Mechanism in GAAFET Using Quantum Transport Simulations, <i>Mendez</i>	Tungsten-Integrated Photopolymer Composites for Extreme Chemical and Radiation Environments Fabricated via Vat Photopolymerization, <i>Mahmud</i>	INVITED - Accelerated Materials Science using Artificial Intelligence and Machine Learning, <i>Nandu Shanti</i>
9:45	Controlled Formation of Polyureas Using Microencapsulated isocyanate, <i>Herman</i>	Vibration and High Cycle Fatigue in Solder Joints, <i>Fowler</i>	From Slurry to Ceramic: Process Optimization for Fabricating MgO Ceramics with Vat Photopolymerization Additive Manufacturing, <i>Bezek</i>	
10:00	High-Throughput Electrodeposition of Pt-Au Alloy Coatings Designed for Superior Wear Resistance in Electrical Contacts, <i>Karnes</i>	INVITED - Advancing Electrochemical Sensor Research at Navajo Technical University, <i>Soundappan</i>	INVITED - Expanding the Materials Toolbox for Vat Photopolymerization, <i>Fowler</i>	AI Assisted Discovery of High Entropy Alloys for Reversible Hydrogen Getters, <i>Smith</i>
10:15	Effect of Rhenium Content and Annealing Temperature on Microstructure and Mechanical Properties of Molybdenum-Rhenium Alloys, <i>Pinzon</i>			Deep Learning-Based Segmentation for Porosity and Dendrite Quantification in Aluminum-Silicon Castings, <i>Tarin</i>
10:30	Investigating Aqueous-based Electrodeposition of Molybdenum for Use in Extreme Environments, <i>Watkins</i>	Resonance Engineering for Subwavelength Control of Light, <i>Babicheva</i>	Sensitization and Recrystallization of AM Stainless Steel 316L under Repeated Annealing, <i>Ortega</i>	Automating CSR Aging Analysis for Organic Materials, <i>Cassidy</i>
10:45	Break			
11:00	Kreidl Lecture by Seth Coe-Sullivan			
12:00	Lunch			
12:45	Poster Session/Sponsor Exhibition - posters and exhibitors			
1:45-2:00	Break			

Room	Sierra 1	Sierra 2	Sierra 3	Ocotillo 2
Session	Structural Materials and Failure Mechanisms	Electronics, Magnetics and Photonic Materials & Devices	Advanced and Printed Manufacturing	AI/ML + Theory, Modelling and Prediction
Chair	Finrock	Biederman	Buckner	Choudhuri
2:00	Atomistic Insights into Solid-Melt Interfacial Properties and Dendrite orientation in Al-Mg-Zn Alloys, <i>Swamy</i>	Radiation tolerance of granular metal thin films, <i>Landi</i>	INVITED - Progress and plans for LPBF On Machine Monitoring at SNL, <i>White</i>	Fine-Tuning LLMs to Design Novel Porous Liquid Compositions for Enhanced Biogas Separations, <i>Brown</i>
2:15	INVITED - Transient Liquid Phase Surface Metallurgy for Fatigue Resistance and Crack Healing, <i>LePage</i>	Nanoscale Structural and Compositional Evolution of Mo-SiNx Granular Metal Thin Films, <i>Cerra</i>		Constitutive Calibration as a Data Problem: Physics Informed Machine Learning Using High-Rate Experiments on an Ontology-Backed Workflow, <i>Cazares</i>
2:30		INVITED - Performing a Solar Oberth Maneuver to Reach the Near Interstellar Medium with a Solar Thermal Propulsion System, <i>Benkoski</i>	A Dual Method Approach to Development of Printable Age-Hardened Al-Cu Alloy for LPBF Applications, <i>O'Connell</i>	An Ab Initio Molecular Dynamics Study on Water Confinemen in Quartz, <i>Bodi</i>
2:45	Void Nucleation in an Oxide-Dispersion-Strengthen Copper Alloy, <i>Bennet</i>	Investigating the Mechanism of Complete Conductive Filament Dissolution in Tantalum Oxide-Based RRAM Devices, <i>Stringer</i>	INVITED - Microstructural and Mechanical Behavior of Inoculated Aluminum 7075 Alloy Fabricated through Wire Arc Additive Manufacturing, <i>Buckner</i>	Digital Fluid Modeling for Permanent Mold Hemispherical Castings of Aluminum Alloy with Varying Colling Rates, <i>Acosta-Cordero</i>
3:00	Strain State, Strain Rate Temperature Interplays in Tensile Failure of Pure Tantalum, <i>Finrock</i>			Compression vs. Tension-Induced Wrinkle Formation on Thin Films Strcutures: Three-Dimensional Numerical Simulations, <i>Anan</i>
3:15	Break / Refreshments			
Room	Sierra 1	Sierra 2	Sierra 3	Ocotillo 2
Session	Structural Materials and Failure Mechanisms	Electronics, Magnetics and Photonic Materials & Devices	Advanced and Printed Manufacturing	AI/ML + Theory, Modelling and Prediction
Chair		Fowler/Minster	Mills	
3:30	Comparison of the Tensile Deformation Behavior of BCC+B2 and HCP+B2 Microstructures in a Zr-Ru Refractory Alloy, <i>Polash</i>	Infrared Photoresponse and Signatures of Steady Floquet States in Graphene Systems , <i>Kalugin</i>	Advances in Melt-Based Processing of Aluminum Alloys: Laser Beam Welding (LBW) & Wire Directed Energy Deposition (W-DED), <i>Mills</i>	An Ab Initio Molecular Dynamics-Based Comparison of Solute Induced Stability of Liquid-Al/Intermetallic-Al3Sc Interfaces, <i>Ghose</i>
3:45	Grain Size and Temerature Effects on Twinning and Slip in ECAP-Processed WE43 Magnesium Alloy, <i>Maldonado</i>	Strong Radial Electric Field Scaling Near Nanoscale Conductive Filaments and the ReRAM Reset Mechanism, <i>Gedrim</i>	Femtosecond Laser Mchining of Site-Specific Micromechanical test Samples for Interfacial Property Characterization , <i>Barker</i>	Computational Analyses of Effective Elastic Modulus and Thermal Conductivity of Porous Structures from Closed-cells to Open-cells, <i>Ghosh</i>
4:00		Improving Solder Joint Strength in AM Flex Cables, <i>Minster</i>		Screening Amino Acids Rare-Earth Complexes for Selective Binding Using Tight-Binding Methods and AIMD, <i>Boyd</i>
4:15	Award & Scholarship Announcements			
5:00	End			