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	Scott Bobbitt	Hannah Fowler	Leah Appelhans	Nandu Santhi
9:30	**High-Throughput Synthesis of High-Entropy Metal-Organic Frameworks for Chemical Warfare Agent Remediation,** *Siu*	**Identifying a Novel Gate-Drain Leakage Mechanism in GAAFET Using Quantum Transport Simulations,** *Mendez*	**Tungsten-Integrated Photopolymer Composites for Extreme Chemical and Radiation Environments Fabricated via Vat Photopolymerization,** *Mahmud*	**INVITED - Accelerated Materials Sciensie using Artificial Intelligence and Machine Learning,** *Nandu Santhi*
9:45	**Controlled Formation of Polyureas Using Microencapsulated isocyanate,** *Herman*	**Vibration and High Cycle Fatigue in Solder Joints,** H. *Fowler*	**From Slurry to Ceramic: Process Optimizatin for Fabricating MgO Cermics with Vat Photopolymerization Additive Manufacturing,** *Bezek*	
10:00	**High-Throughput Electrodeposition of Pt-Au Alloy Coatings Designed for Superior Wear Resistance in Electrical Contacts,** *Karnes*	**INVITED - Advancing Electrochemical Sensor Research at Navajo Technical University,** *Soundappan*	**INVITED - Expanding the Materials Toolbox for Vat Photopolymerization,** Hayden *Fowler*	**AI Assisted Discovery of High Entropy Alloys for Reversible Hydrogen Getters,** *Smith*
10:15	**Investigating Aqueous-based Electrodeposition of Molybdenum for Use in Extreme Environments,** *Watkins*			**Deep Learning-Based Segmentation for Porosity and Dendrite Quantification in Aluminum-Silicon Castings,** *Tarin*
10:30	**Effect of Rhenium Content and Annealing Temperature on Microstrcuture and Mechanical Properties of Molybdenum-Rhenium Alloys,** *Pinzon*	**Resonance Engineering for Subwavelength Control of Light,** *Chowdhury*	**Sensitization and Recrystallization of AM Stanless Steel 316L under Repeated Annealing,** *Ortega*	**Automating CSR Aging Analysis for Organic Materials,** *Cassidy*
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	Chris Finfrock	Laura Biederman	Jessica Buckner	Deep Choudhuri
2:00	**Atomistic Insights into Solid-Melt Interfacial Properties and Dendrite orientation in Al-Mg-Zn Alloys,** *Swamy*	**Nanoscale Structural and Compositional Evolution of Mo-SiNx Granular Metal Thin Films,** *Cerra*	**INVITED - Progress and plans for LPBF On Machine Monitoring at SNL,** *White*	**Fine-Tuning LLMs to Design Novel Porous Liquid Compositions for Enhanced Biogas Separations,** *Brown*
2:15	**INVITED - Transient Liquid Phase Surface Metallurgy for Fatigue Resistance and Crack Healing,** *LePage*	**Radiation tolerance of granular metal thin films,** *Landi*		**Constitutive Calibration as a Data Problem: Physics Informed Machine Learning Using High-Rate Experiments on an Ontology-Backed Workflow,** *Cazares*
2:30		**INVITED - Performing a Solar Oberth Maneuver to Reach the Near Interstellar Medium with a Solar Thermal Propulsion System,** *Benkoski*	**A Dual Method Approach to Development of Printable Age-Hardened Al-Cu Alloy for LPBF Applications,** *O'Connell*	**An Ab Initio Molecular Dynamics Study on Water Confinement in Quartz,** *Bodi*
2:45	**Void Nucleation in an Oxide-Dispersion-Strengthen Copper Alloy,** *Bennett*		**INVITED - Microstructural and Mechanical Behavior of Inoculated Aluminum 7075 Alloy Fabricated through Wire Arc Additive Manufacturing,** *Buckner*	**Digital Fluid Modeling for Permanent Mold Hemispherical Castings of Aluminum Alloy with Varying Colling Rates,** *Acosta-Cordero*
3:00	**Strain State, Strain Rate Temperature Interplays in Tensile Failure of Pure Tantalum**, *Finfrock*	**Investigating the Mechanism of Complete Conductive Filament Dissolution in Tantalum Oxide-Based RRAM Devices,** *Stringer*		**Compression vs. Tension-Induced Wrinkle Formation on Thin Films Strcutures: Three-Dimensional Numerical Simulations,** *Anan*
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	Jay Carroll	Hannah Fowler/Josh Minster	Leah Mills	Guatam Bordia
3:30	**Comparison of the Tensile Deformation Behavior of BCC+B2 and HCP+B2 Microstructures in a Zr-Ru Refractory Alloy,** *Polash*	**Infrared Photoresponse and Signatures of Steady Floquet States in Graphene Systems ,** *Kalugin*	**Advances in Melt-Based Processing of Aluminum Alloys: Laser Beam Welding (LBW) & Wire Directed Energy Deposition (W-DED),** Mills	**An Ab Initio Molecular Dynamics-Based Comparison of Solute Induced Stability of Liquid-Al/Intermetallic-Al3Sc Interfaces,** *Ghose*
3:45	**Grain Size and Temerature Effects on Twinning and Slip in ECAP-Processed WE43 Magnesium Alloy,** *Maldonado*	**Strong Radial Electric Field Scaling Near Nanoscale Conductive Filaments and the ReRAM Reset Mechanism,** *Gedrim*	**Femtosecond Laser Mchining of Site-Specific Micromechanical test Samples for Interfacial Property Characterization ,** *Barker*	**Computational Analyses of Effective Elastic Modulus and Thermal Conductivity of Porous Structures from Closed-cells to Open-cells,** *Shen*
4:00	**INVITED - Nuclear fuel performance simulations of gas evolution, swelling and creep informed by lower length scale investigations,** *Andersson*			**Screening Amino Acids Rare-Earth Complexes for Selective Binding Using Tight-Binding Methods and AIMD,** *Boyd*
4:15				
4:30	**Award & Scholarship Announcements**			
5:00	**End**			