MMM12 Poster Presentation Schedule

Presentation Time: **17:30-19:30**, Nov 10 (Tue), 2026
13:00-15:00, Nov 11 (Wed), 2026

Date	Presentation No.	Presenter	Title
Nov. 10 (Tue)	PO-QM-038	Franco Moitzi	First-principle based description of defects in complex alloys with magnetic and compositional disorder
Nov. 10 (Tue)	PO-QM-114	Evgeny Tararushkin	Vibrational and dynamic properties of water in cementitious AFm phases
Nov. 10 (Tue)	PO-QM-243	Fabienne Ribeiro	Tight-Binding study of the coupling between chemical and magnetic ordering in FeNi alloys
Nov. 10 (Tue)	PO-QM-304	Léo Hallégot	A Magnetic Tight-Binding Monte Carlo Approach for Transition Metals at Finite Temperature
Nov. 10 (Tue)	PO-QM-340	Woojin Jung	First-Principles Study of Vacancy-Assisted Helium Trapping in NbC and gamma''-Ni3Nb Precipitates in Ni-Based Alloys
Nov. 10 (Tue)	PO-QM-353	Yuki Yamashita	Probing Neighbor-Atom Effects on Adsorption over High-Entropy Alloy Surfaces Using Fractional Nuclear Charges
Nov. 10 (Tue)	PO-QM-367	Konstantin V. Kravtsov	Raman Spectrum of Functionalized Graphene from First-Principles Calculations
Nov. 10 (Tue)	PO-QM-395	Liutauras Kiltinavicius	Atomistic insight into the interactions of small molecules with the surfaces of CeO_2 as a surrogate for PuO_2
Nov. 10 (Tue)	PO-QM-733	Yanmei Zang	Breaking the CO bridge trap: boron–transition-metal trimer clusters for efficient C–C coupling in CO2 reduction
Nov. 10 (Tue)	PO-QM-739	Shubha Dubey	Phase-Segregation-Driven Heterostructure Formation and Interfacial Charge-Transfer Mechanism in Ba3V2O8/BaFeO2.654 Oxides with Defect-Mediated Optical and Surface Photocatalytic Response
Nov. 10 (Tue)	PO-QM-740	Jiwon Choi	AI-Based Generative Search for New Altermagnetic Candidates with Large Spin Splitting
Nov. 10 (Tue)	PO-QM-743	Yuhyun Cha	Multiscale First-Principles Discovery of Emergent Topological Spin Textures in Monolayer Transition-Metal Dichalcogenides
Nov. 10 (Tue)	PO-QM-767	Yoon-Gu Kang	Proximity-Induced Dirac Gap in Graphene at a Correlated Antiferromagnetic Interface
Nov. 10 (Tue)	PO-QM-783	Wei Cai	Phonon-crystal field coupling in D3d Ce3+ compounds
Nov. 10 (Tue)	PO-MM-089	Kenji Nishimura	Compressive Deformation Anisotropy of 3C-SiC Nanoparticles: A Molecular Dynamics Study
Nov. 10 (Tue)	PO-MM-115	Dowon Kim	Machine Learning-Based Alloy Design Using In-house DED Data: Prediction and Optimization of Hardness–Conductivity Trade-off in Aluminum Alloys
Nov. 10 (Tue)	PO-MM-400	Saya Nakatani	Effect of interface anisotropy modeling on scan-strategy-dependent microstructure prediction in coarse-grained multi-phase-field simulations for LPBF
Nov. 10 (Tue)	PO-MM-544	Yuta Arai	Beyond Spherical Powders: How Good Are Regular Polyhedral Particles in Powder Bed Fusion? A Digital Twin Science Study Using 3D-Printed Particles and DEM Simulations
Nov. 10 (Tue)	PO-MM-564	Rei Miyawaki	In-situ Observation and Digital Twin Analysis of Melt Pool Dynamics under Laser Beam Irradiation of Stainless Steels
Nov. 10 (Tue)	PO-MM-565	Jeong Woong Park	Shearable B2 ordering and delayed TRIP kinetics in an additively manufactured low-Mn Fe-Mn-Al-C lightweight triplex steel
Nov. 10 (Tue)	PO-MM-570	Cho Hyeon Lee	Elucidation of the Mechanisms of Enhanced Cryogenic Strength in Additively Manufactured 316L Stainless Steel
Nov. 10 (Tue)	PO-MM-607	Haeum Park	Role of Si-decorated cell structure in cryogenic tensile behavior of additively manufactured AlSi10Mg alloy
Nov. 10 (Tue)	PO-MM-615	Ji Sang Yoon	Data-driven analysis of process parameters effects on defect formation in Ti-6Al-4V alloy fabricated by laser powder bed fusion
Nov. 10 (Tue)	PO-MM-682	Seung-Hoon Lee	Microstructural characterization and design of interface in plasma-facing components manufactured by laser powder bed fusion
Nov. 10 (Tue)	PO-MM-702	Min Young Lee	Directed Energy Deposition of A Medium Mn austenitic Steel:Influence of Laser Power on Mn heterogeneity and plastic deformation
Nov. 10 (Tue)	PO-MM-741	Dae-Hyeon Kim	Effect of Manufacturing Route on the High-Temperature Oxidation Kinetics and Oxide-Scale Evolution of Haynes 214
Nov. 10 (Tue)	PO-MM-749	SHIVAM TRIVEDI	Linking Process-Induced Microstructural Heterogeneity to Dynamic Deformation Behavior in Wire Arc Additive Manufactured Al-Si Alloy
Nov. 10 (Tue)	PO-MM-751	Dinudaya Sandaru Palliyaguruge	Finite Element Analysis of Mechanical Behaviour of WAAM-Manufactured Lattice Structures
Nov. 10 (Tue)	PO-FM-317	Seohee Jang	Intermetallic Core Effects on ORR Catalytic Properties of Pt-Shell Nanoparticles
Nov. 10 (Tue)	PO-FM-318	Yeonwoo Do	Electrochemical Urea Synthesis via CO2/NO Co-Reduction and Adsorption Behavior of Co–Ni–Cu Catalysts
Nov. 10 (Tue)	PO-FM-501	Min Jun Kim	A pathway to p-type activation of Sb2Se3 for highly efficient photovoltaic absorbers
Nov. 10 (Tue)	PO-FM-551	Seo Jin Jang	First-principles Study of Structural Stability and Charge Compensation at the CsSnI3/Cs2SnI6 Interface
Nov. 10 (Tue)	PO-FM-553	Jin Woong Park	Modeling Triazine-Functionalized Aluminum/Polypropylene Interfaces for Advanced Energy Storage Packaging
Nov. 10 (Tue)	PO-FM-554	Yun Seok Jang	Theoretical Investigation of Pressure and Temperature-Dependent Polymorphic Phase Transitions in CsPbI3
Nov. 10 (Tue)	PO-FM-728	Jiqi Xing	Determination of distinct Cr doping sites and their effects on tribological properties
Nov. 10 (Tue)	PO-FM-746	XINYI HE	Eu-based Inverse-Perovskite Oxide with Low Lattice Thermal Conductivity and Promising Thermoelectric Properties
Nov. 10 (Tue)	PO-MS-077	Sota Doniwa	Structure and Viscosity of Concentrated Polymer-Colloid Suspensions under Shear
Nov. 10 (Tue)	PO-MS-207	Taisei Ueda	Tensile and flexural mechanics of self-assembled polymer nanocomposite films with polymer-grafted nanoparticles using coarse-grained molecular dynamics
Nov. 10 (Tue)	PO-MS-316	Seokho Lee	Effect of Coordination Number and Hydrogen Variation on the Adsorption Energies of Pb-Labeled DOTA Complexes
Nov. 10 (Tue)	PO-MS-360	Vladimir Deshchenya	Molecular dynamics simulations of sucrose infiltration into kaolinite nanopores: transport kinetics and surface interactions
Nov. 10 (Tue)	PO-MS-370	Timur Guskov	Calcite wettability in crude oil/brine systems under reservoir conditions: Role of dissolved gases, asphaltenes, and salinity
Nov. 10 (Tue)	PO-MS-421	Chang-Su Woo	Development of an Integrated Rubber Components Design Based on a Rubber Materials Property Database
Nov. 10 (Tue)	PO-MS-489	Kaede Tomiyama	Drying-Induced Self-Assembly of Charged Polymer Nanocomposites Using Coarse-Grained Molecular Simulations

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Date	Presentation No.	Presenter	Title
Nov. 10 (Tue)	PO-MS-497	Kota Nishikawa	Analysis of Morphogenetic Mechanisms and Bifurcations in Tendrils
Nov. 10 (Tue)	PO-MS-510	Kazuki Nakada	Evaporative Self-Assembly of Patchy Nanoparticles in Colloidal Droplets: A Molecular Dynamics Study
Nov. 10 (Tue)	PO-MS-530	zhouxin	Preparation and Performance Study of Natural Polysaccharide-Based Multifunctional Hydrogels for Neural Injury
Nov. 10 (Tue)	PO-MS-537	Yuya Nagasoko	A Molecular Dynamics Study of the Influence of Nanosheet Surface Heterogeneity on Thermal Transport in Polymer Nanocomposites
Nov. 10 (Tue)	PO-MS-724	Sota Doniwa	Structural Relaxation and Mechanical Response of Polymer-Grafted Nanoparticle-Stabilized휺 Droplets under Compression
Nov. 10 (Tue)	PO-AA-085	Hyunkyung Choo	A Topology-Aware Multiscale Surrogate for Long-Time Dynamics of Entangled Polymer Melts
Nov. 10 (Tue)	PO-AA-096	Hannes Holey	Multiscale Simulation of Lubricated Nanoasperity Contacts
Nov. 10 (Tue)	PO-AA-112	Daniele Lanzoni	Learning stochastic dynamics with generative adversarial networks: quantitative reproduction of lattice kinetic Monte Carlo simulations of surface dynamics
Nov. 10 (Tue)	PO-AA-137	Seungchang Han	Many-Body Effects on the Coverage-Dependent CO Adsorption on Cu(111)
Nov. 10 (Tue)	PO-AA-140	Suyeon Yoo	Potential-Dependent Kinetic Modeling of Electrochemically Induced Cu Surface Reconstruction
Nov. 10 (Tue)	PO-AA-204	Chanjin Kim	Machine-Learning-Driven Exploration of Copper Oxide Precursor Evolution under Reducing Conditions
Nov. 10 (Tue)	PO-AA-355	Alexander Whittle	Markov-Switching VAR for Molecular Dynamics Surrogate Modelling
Nov. 10 (Tue)	PO-AA-411	Marvin Poul	landau: an open source library for thermodynamic equilibria
Nov. 10 (Tue)	PO-AA-542	Seonghwan Kim	CALPHAD-Guided Prediction of Hot-Deformation Behavior in Steels
Nov. 10 (Tue)	PO-AA-550	Eun Ha Shin	AI Agent for Inverse Estimation of Defect Parameters in Perovskite Solar Cells Using J–V Curves
Nov. 10 (Tue)	PO-AA-745	Raynol Dsouza	A generalized mean-field bond model for anharmonic thermodynamics of complex crystals
Nov. 10 (Tue)	PO-IM-133	Soomin Kim	Influence of High-Energy Ball Milling on the Thermal and Mechanical Behavior of Ti–Nb Alloys
Nov. 10 (Tue)	PO-IM-162	Jaehun Kim	Microstructural Evolution and Strain Partitioning during TRIP Behavior Investigated by Micro DIC, In Situ EBSD, and CPFEM
Nov. 10 (Tue)	PO-IM-225	Rikuto Hori	Three-dimensional fracture-mechanics analysis of hydrogen-assisted cracking in metastable austenitic stainless steel by in-situ synchrotron nano-tomography
Nov. 10 (Tue)	PO-IM-538	Siwon Park	Unveiling the Role of Te Lone-Pair States in Amorphous Te-based Ovonic Threshold Switching Device for Energy-Efficient Neuromorphic Applications
Nov. 10 (Tue)	PO-IM-560	Daichi Tanaka	Identification of Critical Resolved Shear Stresses (CRSSs) for polycrystalline as-cast Mg-Zn-Y alloys based on lattice strain development
Nov. 10 (Tue)	PO-IM-600	Hyunyoung Park	Short-Range Ordered GP Zones in Al-4Cu Alloy Analyzed by Mechanical Testing and Multi-Zone Axis TEM
Nov. 10 (Tue)	PO-IM-752	BHANU PRATAP SINGH	Exercising a differential latent hardening approach for comprehending the temperature dependent evolution of crystallographic texture in high nitrogen steels
Nov. 10 (Tue)	PO-HM-111	Jiwon Lee	Strengthening behavior of aluminum matrix composites containing hybrid reinforcements
Nov. 10 (Tue)	PO-HM-194	chunye ma	Microscopic Kinetics of Water Adsorption in Metal-organic Frameworks
Nov. 10 (Tue)	PO-HM-202	Yuanyuan Wang	Low-grade Heat driven Ion Transport through 2D MXene Channels
Nov. 10 (Tue)	PO-ME-051	Suehaeng Sung	Impact of Activation Energy Uncertainty on Chemical Reaction Networks
Nov. 10 (Tue)	PO-ME-101	Shunji Tanaka	Data assimilation between continuum phase-field and atomistic phase-field-crystal simulations for accurate Ostwald ripening prediction
Nov. 10 (Tue)	PO-ME-130	Ayano Yamamura	Data assimilation for determining interfacial energy anisotropy and polycrystalline orientations from dendrite growth morphologies in hexagonal alloys
Nov. 10 (Tue)	PO-ME-279	Park Yong-Wook	Latent diffusion on concentration fields for microstructure generation with sub-1% minority phases
Nov. 10 (Tue)	PO-ME-281	Do-Hyun Kim	Phase-field-based electrochemical potential mapping for galvanic corrosion prediction in Mg–Ca–Zn alloys
Nov. 10 (Tue)	PO-ME-285	Jinhyun Bang	Voxel-CNN Surrogate for Microstructure-Dependent P–E Hysteresis in HZO Ferroelectrics, Verified by Phase-Field Simulation
Nov. 10 (Tue)	PO-ME-294	Changhyeon Han	Phase-field topology optimization of periodic cross-lattice cells incorporating crystallographic elastic anisotropy of the base alloy
Nov. 10 (Tue)	PO-ME-381	Ken Tokunaga	4D microstructure reconstruction and material parameter estimation from thin-film X-ray in-situ observations through integration of Bayesian optimization and phase-field simulations
Nov. 10 (Tue)	PO-ME-513	Xuezhou Wang	Modelling the role of impurity trapping in excess vacancy evolution and its influence on age hardening behaviors in multicomponent aluminium alloys
Nov. 10 (Tue)	PO-ME-658	Hideto Nishikawa	Phase-field modeling of metal nanowire growth driven by stress-induced diffusion and grain boundary kinetics
Nov. 10 (Tue)	PO-ME-721	Nan Wang	A general parameterization for one-component phase field crystal model
Nov. 10 (Tue)	PO-MH-288	Yifan Wang	Atomic-Level Coupling of Chemical and Mechanical Driving Forces in Iron-Based Oxygen Carriers for Sustainable Hydrogen Storage

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Date	Presentation No.	Presenter	Title
Nov. 11 (Wed)	PO-AM-145	Heting Liao	Charge-Density-Guided Equivariant Graph Neural Networks for Small-Data and Out-of-Domain Energy Prediction
Nov. 11 (Wed)	PO-AM-219	Kazuki Sasakawa	Machine learning model trained using phase-field simulation data for predicting 3D microstructures from 2D cross-sectional images
Nov. 11 (Wed)	PO-AM-257	Hamidreza Razavi	Physics-Informed Graph Neural Networks for Long-Horizon Microstructure Evolution Forecasting
Nov. 11 (Wed)	PO-AM-275	Seongu Han	AI-assisted composition design of Fe-based soft magnetic alloys via semi-supervised active learning
Nov. 11 (Wed)	PO-AM-282	Kyungwhan Lee	Experimental-Based Construction of a Combinatorial Dataset for Machine Learning Alloy Design
Nov. 11 (Wed)	PO-AM-289	Jihoo Kim	Chemically Intuitive Equivariant Graph Neural Networks for Directional Property Learning
Nov. 11 (Wed)	PO-AM-327	Seo-Hui Park	Multi-Objective Active Learning for Accelerated Design of C14 Laves-Type $TiMn_2$-Based High-Entropy Alloys for Hydrogen Storage.
Nov. 11 (Wed)	PO-AM-621	Young-Kwang Kim	An Ontology-Based Knowledge Graph Approach for Materials and Process Optimization under Data-Scarce Conditions.
Nov. 11 (Wed)	PO-AM-718	Propad Y.V.	EnvXGen: the open-source framework for crystal structure prediction with fixed structural environment
Nov. 11 (Wed)	PO-AM-736	Taegyun Lee	AI-Driven Inverse Design for New Superconductor Discovery
Nov. 11 (Wed)	PO-MD-013	Alexandre Bergero	Machine-learning interatomic potential for deposition and sputtering of WB inside fusion reactors
Nov. 11 (Wed)	PO-MD-132	Dianwei Hou	Machine-learning simulations predict graphene is hydrophobic and not wetting transparent
Nov. 11 (Wed)	PO-MD-144	Yakov Mkrtchyan	On the possibility of phase transition in liquid selenium from molecular dynamics
Nov. 11 (Wed)	PO-MD-192	Norikazu Miyagawa	Impact of polycrystalline model construction methods on molecular dynamics-based mechanical property evaluation
Nov. 11 (Wed)	PO-MD-217	Matthew Harris	Bootstrapped MACE potential for nitrogen vacancy driven phase stability in high entropy nitrides
Nov. 11 (Wed)	PO-MD-236	Durga Prasanth Dude	Atomistic Insights into the Kinetics of Copper Oxide Deoxidation via Hydrogen: A Reactive Molecular Dynamics Study
Nov. 11 (Wed)	PO-MD-258	Shuto Araki	DeepMD Study of Exfoliability in Remote-Epitaxial SiC Films on Graphene
Nov. 11 (Wed)	PO-MD-260	Arata Kuroishi	Coarse-Grained Molecular Dynamics Study of Nanoparticle-Shape Effects on Superlattice Formation and Mechanical Response in One-Component Polymer-Grafted Nanoparticle Assemblies
Nov. 11 (Wed)	PO-MD-303	Jiei Taniguchi	Effect of Cooling Rate on STZ Core Formation in Cu–Zr Metallic Glasses
Nov. 11 (Wed)	PO-MD-342	Rin Ohta	Unveiling Plastic Deformation Units in Glassy Silica
Nov. 11 (Wed)	PO-MD-516	Shota Mori	Machine-Learning Potential-Based Large-scale Molecular Dynamics Analysis of the Local Structure around Dislocation Cores in Li6PS5Cl and Its influence on Ionic conductivity
Nov. 11 (Wed)	PO-MD-523	Sakuto Taya	Analysis of the Microscopic Deformation Mechanisms of Antigorite by Molecular Dynamics Using a Machine-Learning Potential
Nov. 11 (Wed)	PO-MD-527	Yifeng Xie	Dislocation-driven active learning interatomic potentials for Cantor's high-entropy alloys in spin-dynamics-coupled molecular dynamics
Nov. 11 (Wed)	PO-MD-532	Dario Ferrando	A Martini 3 coarse-grained model of graphene oxide
Nov. 11 (Wed)	PO-MD-725	Taisei Ueda	Self-Assembly and Shear Response of Confined Patchy Nanoplates: Hybrid MD–Mesoscale Hydrodynamic Simulations
Nov. 11 (Wed)	PO-MD-738	Bronwyn Thomas	Quantitative phase analysis using global structural signatures in molecular dynamics simulations
Nov. 11 (Wed)	PO-MD-742	Qi Wang	From Hydration Structure to Catalytic Electrode: Molecular Dynamics Insights into Cr^{3+} Dissociation for Enhanced Iron-Chromium Flow Battery Performance
Nov. 11 (Wed)	PO-MD-747	Faith Kporha	Atomistic Modeling of Deuterium Sputtering from Deuterium-Decorated Tungsten Surfaces
Nov. 11 (Wed)	PO-MD-748	Heidi Laitinen	Effects of Diffusion Processes on Atomic Ordering in Mo-Nb-Ta-V-W Thin Films
Nov. 11 (Wed)	PO-FD-252	Sreya Viswanathan	Calculation of electronic stopping of self-ions in copper: from first principles to a dissipative molecular dynamics model
Nov. 11 (Wed)	PO-FD-569	minyu kang | jaebok Seol	Effect of Ni content on retained Austenite Characteristics and cryogenic Tensile Behavior of High-Ni Steels
Nov. 11 (Wed)	PO-FD-579	WonChan Lee	Integrated Atomistic Modeling and Microstructural Characterization of Orientation-Dependent Corrosion in Pure Nickel Exposed to NaCl–$MgCl_2$ Molten Salt
Nov. 11 (Wed)	PO-FD-603	An JeongHo	Nanoscale Electric Double Layer Modeling at the Metal/Molten Chloride Interface Using MOOSE
Nov. 11 (Wed)	PO-FD-664	Dohyeon Yun | Dongwook Kim	Atomistic Modeling of Interfacial Damage and Failure in Cu–Cu Direct Bonding: A Comparative Molecular Dynamics Study of Single-Crystal, Nanotwinned, and CuAg Alloy Configurations
Nov. 11 (Wed)	PO-FD-722	Thierry Auger	Solid-liquid interfaces and energetic criterium in Liquid Metal Embrittlement
Nov. 11 (Wed)	PO-FD-730	Xiaolin Li	Synergistic enhancement of hydrogen embrittlement resistance from room to cryogenic temperatures in FeMnCoCrNbC High-Entropy Alloy via precipitation and heterogeneous microstructure
Nov. 11 (Wed)	PO-FD-779	Varvara Panurchenko	Effect of TiB Whiskers on Dwell Fatigue Properties of TMC with Ti64 Matrix
Nov. 11 (Wed)	PO-FD-780	Minsang Joh	Micromechanical Characterization of Duplex and Fully Lamellar γ-TiAl Microstructures
Nov. 11 (Wed)	PO-DD-055	Milind Singh	Optimizing the Microstructure and Texture for a Given 6xxx Series Al Alloy Under Tensile Loading Conditions Using Crystal Plasticity
Nov. 11 (Wed)	PO-DD-191	Yangen Li	Origin of plastic anisotropy in BCC metals from dislocation energy landscape
Nov. 11 (Wed)	PO-DD-363	Seungyun Kim	Development of a Machine Learning Interatomic Potential for Atomistic Simulations of Radiation Damage Processes in Nb3Sn
Nov. 11 (Wed)	PO-DD-468	Ryo Kobayashi	Unified Modeling of Lattice Defects Based on Differential Geometry and Topology
Nov. 11 (Wed)	PO-DD-511	Matthew Lloyd	Kinetic Monte Carlo Modelling of Solute and Vacancy Diffusion in Tungsten Alloys during Thermal Aging and Irradiation

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Date	Presentation No.	Presenter	Title
Nov. 11 (Wed)	PO-DD-548	Spencer Fajardo	Linking Shear Transformation Zones to Features of the Local Yield Surface in Simulated Metallic Glasses
Nov. 11 (Wed)	PO-DD-557	Matthew Maron	Coupled Cluster and Dislocation Dynamics Modeling of Microstructure Evolution in Irradiated Materials
Nov. 11 (Wed)	PO-DD-558	Longzhou Huang	Comparison of topological defects in crystalline and amorphous solids
Nov. 11 (Wed)	PO-DD-595	Kazuhiko EMA	First-Principles Analysis of Slip Deformation Behavior in ω-Ti
Nov. 11 (Wed)	PO-DD-617	Ting Lei	Selection Rule for Stable Schwarz Nanocrystals from a Super-Bravais Lattice Framework
Nov. 11 (Wed)	PO-DD-683	Nana WANG	Effect of Sc Element on the Microstructure and Mechanical Propertites of Al-Zn-Mg Alloys
Nov. 11 (Wed)	PO-DD-698	Seunggyu Hong	Creep Damage Evolution in Compositionally Modified Haynes 282-Based Ni Superalloys
Nov. 11 (Wed)	PO-DD-699	Seong Hyeon Yang	Effect of Sn Addition on Precipitation Behavior and Mechanical Properties of Al–4Cu–1.5Mg Casting Alloys
Nov. 11 (Wed)	PO-DD-754	Abinash Pradhan	Microstructural evolution and fracture characteristics during Creep deformation of 16Cr-ODS Steel
Nov. 11 (Wed)	PO-MN-058	Jingya Zhang	Composition-dependent dislocation mobility in FeNiCrCoCu high-entropy alloys based on atomistic simulations and machine learning analysis
Nov. 11 (Wed)	PO-MN-319	Won-Gyu Choi	DFT-Based Theoretical Modeling of Interfacial Adhesion Energy between Cu and (Mo,Nb) Alloys for Enhanced Mechanical Reliability
Nov. 11 (Wed)	PO-MN-356	Ruben Escobar	VACANCY-DIFFUSION MOTIVATED CREEP IN BCCS AND RHEAS
Nov. 11 (Wed)	PO-MN-418	Colin Gerlach	Constitutive Material Model Parameter Optimization for Structural Fusion Materials
Nov. 11 (Wed)	PO-MN-731	Hun-Min Jo	Density functional theory study on the role of ternary alloying elements in Ti-Nb-based shape memory alloys
Nov. 11 (Wed)	PO-MN-734	Muhannad AL-Sindhi	When segmented/fragmented structures become materials
Nov. 11 (Wed)	PO-MH-200	Fengping Luo	Hydrogen regulated synergistic nanocavity evolution in metals: multiscale studies and physical mechanisms for material failure
Nov. 11 (Wed)	PO-MH-209	Fan-Shun Meng	Effect of Carbon on Defect Generation and Accumulation in Polycrystalline α-Iron under Hydrogen Environments
Nov. 11 (Wed)	PO-MH-305	Jeongeun Park	Magnetism-Driven Surface Energetics in TiFe: Implications for Hydrogen Storage
Nov. 11 (Wed)	PO-MH-371	Seongbeen Lee	Machine-Learning-Assisted Modeling of Hydrogen Diffusivity in Zirconium under Temperature and Anisotropic Strain Conditions
Nov. 11 (Wed)	PO-MH-693	Changhun Kim	Effective Carbide Interface Engineering to Mitigate Hydrogen Embrittlement: A First-Principles Study
Nov. 11 (Wed)	PO-MH-696	Seungyoun Jo	Mitigating Hydrogen Embrittlement by Solute Segregation in Austenite/Ferrite Interfaces: Using First Principles Study
Nov. 11 (Wed)	PO-MP-074	Ronan MADEC	Slip System Interaction Strengths in Beryllium: A Dislocation Dynamics Study
Nov. 11 (Wed)	PO-MP-093	Gensei Kobayashi	Phase-field modeling and simulations of solid fragmentation during solidification coupled with crystal plasticity and grain boundary evolution
Nov. 11 (Wed)	PO-MP-135	Akihiro Niwa	Molecular dynamics study of solid fragmentation in a semi-solid state near the melting temperature
Nov. 11 (Wed)	PO-MP-138	Jiarui Zhang	Unified constitutive model of body-centered cubic metals informed by discrete dislocation dynamics
Nov. 11 (Wed)	PO-MP-297	Shunsuke Kobayashi	A Material-Time Manifold Framework for Continuum Dislocation Dynamics: Theory and Finite Element Analysis
Nov. 11 (Wed)	PO-MP-362	Amani Hendricks	A Unified Constitutive Framework for Vanadium Alloys Under Fusion-Relevant Conditions
Nov. 11 (Wed)	PO-MP-498	Shuya Hasegawa	Quantitative evaluation of intra-granular heterogeneous deformation in magnesium alloys with basal texture using polycrystal analysis models
Nov. 11 (Wed)	PO-MP-526	HUANG Yuntong	Phase-Field Modeling of Grain-Boundary Grooving with Tunable Misorientation-Dependent Energy
Nov. 11 (Wed)	PO-MP-571	Won Hui Jo	Multiscale deformation behavior and defect evolution of heterogeneous martensitic constituents in ultra-low-carbon dual-phase steel
Nov. 11 (Wed)	PO-MP-673	Geon-Woo Baek	Effect of Oxygen Content on Microstructure and Defect Characteristics of Directed Energy Deposited CoCrFeMnNi High-Entropy Alloy
Nov. 11 (Wed)	PO-MP-737	Takayuki Shiraiwa	Experimental Benchmarks for Multiscale Modeling of Localized Plasticity: From Slip-Band Strain Fields to Ultrafast Twin Propagation
Nov. 11 (Wed)	PO-DK-417	Taeyean Kang	Influence of Cu Concentration and Ultrasonic Processing on the Microstructural Evolution and Magnetic Performance of Fe-Based Soft Magnetic Alloy Ribbons
Nov. 11 (Wed)	PO-DK-700	Taehyung Kim	Annealing-induced μ-phase precipitation and microstructural heterogeneity in a low-thermal-expansion Fe43.2Co33Ni10.3Cr3.8Mo9.7 complex concentrated alloy with high cryogenic strength
Nov. 11 (Wed)	PO-DK-701	Jae Hyuk Lee	Thermodynamics-Informed Multimodal Analysis of Cryogenic Martensitic Transformation Kinetics in Laser-Shock-Peened Co-Cr-Fe-Ni-Mo Medium-Entropy Alloy Welds
Nov. 11 (Wed)	PO-TM-273	Ryo Kobayashi	Molecular-simulation investigation on Li segregation at grain boundary in LLZO
Nov. 11 (Wed)	PO-TM-726	Nuojin Wang	From Atomic-Scale Interfacial Anisotropy to Ordered Dendrite Splitting in Ni–Nb Alloys
Nov. 11 (Wed)	PO-TM-727	Ziyi Xiong	Incoherent Interfacial Energy from first-principles
Nov. 11 (Wed)	PO-DS-165	Yves Ferro	Multiscale Modeling of Hydrogen and Irradiation Effects in Transmuted W-Re Alloys
Nov. 11 (Wed)	PO-DS-368	Harsh Dudhatra	A Probabilistic Discrete Dislocation Dynamics Framework for Modeling Large scale Obstacle-Induced Hardening in Irradiated Tungsten