MMM12 Poster Presentation Schedule

Presentation Time

Poster Presentation 1: 17:30-19:30, Nov 10 (Tue), 2026

Poster Presentation 2: 13:00-15:00, Nov 11 (Wed), 2026

No.	Sympo. Code	Symposium title
1	QM	Quantum Mechanical Studies of Materials (including Jisoon Ihm Honorary Symposium)
2	AM	AI-driven Materials Discovery and Design
3	MD	Molecular Dynamics Simulation of Materials: From Machine Learning Interatomic Potential to Coarse-Grained Models
4	MM	Multiscale Modeling of Additive Manufacturing
5	FD	Failure and Damage in Extreme Environments
6	FM	Functional Materials Modeling for Energy
7	MS	Modeling of Soft Matter Systems and Polymer Composites
8	DD	Defect and Dislocation Microstructures in Metals and Alloys
9	MN	Modeling of Deformation and Mechanical Performance in Multi-Principal Element Alloys
10	MH	Modeling of Hydrogen Effects in Materials
11	MP	Multiscale Plasticity and Defect Dynamics: Microstructural Evolution for Structural Materials
12	AA	AI-Augmented Multiscale Simulations and Digital Workflows
13	IM	Integrated Modeling and Microstructural Characterization
14	HM	Heat and Mass Transfer Across Scales
15	DK	Defect Kinetics and Microstructures in Complex Concentrated Alloys under Thermomechanical and Radiation Extremes
16	TM	Theory and Modeling of Crystalline Interfaces
17	DS	Defect Segregation Modeling and Defect-driven Deformation in Materials
18	ME	Mesoscale Modeling of Microstructural Evolution: From Monte Carlo to Phase-Field Methods

Poster Presentation 1: 17:30-19:30, Nov 10 (Tue), 2026

#	Presentation No.	Abstract ID	Presenter	Title
1	**PO-QM-38**	38	Franco Moitzi	First-principle based description of defects in complex alloys with magnetic and compositional disorder
2	**PO-QM-114**	114	Evgeny Tararushkin	Vibrational and dynamic properties of water in cementitious AFm phases
3	**PO-QM-222**	222	Daniel F. Urban	Perspectives of Quantum Computing for Material Simulations
4	**PO-QM-243**	243	Fabienne Ribeiro	Tight-Binding study of the coupling between chemical and magnetic ordering in FeNi alloys
5	**PO-QM-304**	304	Léo Hallégot	A Magnetic Tight-Binding Monte Carlo Approach for Transition Metals at Finite Temperature
6	**PO-QM-340**	340	Woojin Jung	First-Principles Study of Vacancy-Assisted Helium Trapping in NbC and gamma''-Ni3Nb Precipitates in Ni-Based Alloys
7	**PO-QM-353**	353	Yuki Yamashita	Probing Neighbor-Atom Effects on Adsorption over High-Entropy Alloy Surfaces Using Fractional Nuclear Charges
8	**PO-QM-367**	367	Konstantin V. Kravtsov	Raman Spectrum of Functionalized Graphene from First-Principles Calculations
9	**PO-QM-395**	395	Liutauras Kiltinavicius	Atomistic insight into the interactions of small molecules with the surfaces of CeO_2 as a surrogate for PuO_2
10	**PO-QM-733**	733	Yanmei Zang	Breaking the CO bridge trap: boron–transition-metal trimer clusters for efficient C–C coupling in CO2 reduction
11	**PO-QM-739**	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
12	**PO-QM-740**	740	Jiwon Choi	AI-Based Generative Search for New Altermagnetic Candidates with Large Spin Splitting
13	**PO-QM-743**	743	Yuhyun Cha	Multiscale First-Principles Discovery of Emergent Topological Spin Textures in Monolayer Transition-Metal Dichalcogenides
14	**PO-QM-767**	767	Yoon-Gu Kang	Proximity-Induced Dirac Gap in Graphene at a Correlated Antiferromagnetic Interface
15	**PO-MM-89**	89	Kenji Nishimura	Compressive Deformation Anisotropy of 3C-SiC Nanoparticles: A Molecular Dynamics Study
16	**PO-MM-115**	115	Dowon Kim	Machine Learning-Based Alloy Design Using In-house DED Data: Prediction and Optimization of Hardness–Conductivity Trade-off in Aluminum Alloys
17	**PO-MM-400**	400	Saya Nakatani	Effect of interface anisotropy modeling on scan-strategy-dependent microstructure prediction in coarse-grained multi-phase-field simulations for LPBF
18	**PO-MM-544**	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
19	**PO-MM-564**	564	Rei Miyawaki	In-situ Observation and Digital Twin Analysis of Melt Pool Dynamics under Laser Beam Irradiation of Stainless Steels
20	**PO-MM-565**	565	Jeong Woong Park	Shearable B2 ordering and delayed TRIP kinetics in an additively manufactured low-Mn Fe-Mn-Al-C lightweight triplex steel
21	**PO-MM-570**	570	Cho Hyeon Lee	Elucidation of the Mechanisms of Enhanced Cryogenic Strength in Additively Manufactured 316L Stainless Steel
22	**PO-MM-607**	607	Haeum Park	Role of Si-decorated cell structure in cryogenic tensile behavior of additively manufactured AlSi10Mg alloy
23	**PO-MM-615**	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
24	**PO-MM-682**	682	Seung-Hoon Lee	Microstructural characterization and design of interface in plasma-facing components manufactured by laser powder bed fusion
25	**PO-MM-702**	702	Min Young Lee	Directed Energy Deposition of A Medium Mn austenitic Steel:Influence of Laser Power on Mn heterogeneity and plastic deformation
26	**PO-MM-741**	741	Dae-Hyeon Kim	Effect of Manufacturing Route on the High-Temperature Oxidation Kinetics and Oxide-Scale Evolution of Haynes 214

27	**PO-MM-749**	749	SHIVAM TRIVEDI	Linking Process-Induced Microstructural Heterogeneity to Dynamic Deformation Behavior in Wire Arc Additive Manufactured Al-Si Alloy
28	**PO-MM-751**	751	Dinudaya Sandaru Palliyaguruge	Finite Element Analysis of Mechanical Behaviour of WAAM-Manufactured Lattice Structures
29	**PO-FM-317**	317	Seohee Jang	Intermetallic Core Effects on ORR Catalytic Properties of Pt-Shell Nanoparticles
30	**PO-FM-318**	318	Yeonwoo Do	Electrochemical Urea Synthesis via CO2/NO Co-Reduction and Adsorption Behavior of Co–Ni–Cu Catalysts
31	**PO-FM-501**	501	Min Jun Kim	A pathway to p-type activation of Sb2Se3 for highly efficient photovoltaic absorbers
32	**PO-FM-551**	551	Seo Jin Jang	First-principles Study of Structural Stability and Charge Compensation at the CsSnI3/Cs2SnI6 Interface
33	**PO-FM-553**	553	Jin Woong Park	Modeling Triazine-Functionalized Aluminum/Polypropylene Interfaces for Advanced Energy Storage Packaging
34	**PO-FM-554**	554	Yun Seok Jang	Theoretical Investigation of Pressure and Temperature-Dependent Polymorphic Phase Transitions in CsPbI3
35	**PO-FM-728**	728	Jiqi Xing	Determination of distinct Cr doping sites and their effects on tribological properties
36	**PO-FM-746**	746	XINYI HE	Eu-based Inverse-Perovskite Oxide with Low Lattice Thermal Conductivity and Promising Thermoelectric Properties
37	**PO-MS-77**	77	Sota Doniwa	Structure and Viscosity of Concentrated Polymer-Colloid Suspensions under Shear
38	**PO-MS-207**	207	Taisei Ueda	Tensile and flexural mechanics of self-assembled polymer nanocomposite films with polymer-grafted nanoparticles using coarse-grained molecular dynamics
39	**PO-MS-316**	316	Seokho Lee	Effect of Coordination Number and Hydrogen Variation on the Adsorption Energies of Pb-Labeled DOTA Complexes
40	**PO-MS-360**	360	Vladimir Deshchenya	Molecular dynamics simulations of sucrose infiltration into kaolinite nanopores: transport kinetics and surface interactions
41	**PO-MS-370**	370	Timur Guskov	Calcite wettability in crude oil/brine systems under reservoir conditions: Role of dissolved gases, asphaltenes, and salinity
42	**PO-MS-421**	421	Chang-Su Woo	Development of an Integrated Rubber Components Design Based on a Rubber Materials Property Database
43	**PO-MS-489**	489	Kaede Tomiyama	Drying-Induced Self-Assembly of Charged Polymer Nanocomposites Using Coarse-Grained Molecular Simulations
44	**PO-MS-497**	497	Kota Nishikawa	Analysis of Morphogenetic Mechanisms and Bifurcations in Tendrils
45	**PO-MS-510**	510	Kazuki Nakada	Evaporative Self-Assembly of Patchy Nanoparticles in Colloidal Droplets: A Molecular Dynamics Study
46	**PO-MS-530**	530	zhouxin	Preparation and Performance Study of Natural Polysaccharide-Based Multifunctional Hydrogels for Neural Injury
47	**PO-MS-537**	537	Yuya Nagasoko	A Molecular Dynamics Study of the Influence of Nanosheet Surface Heterogeneity on Thermal Transport in Polymer Nanocomposites
48	**PO-MS-724**	724	Sota Doniwa	Structural Relaxation and Mechanical Response of Polymer-Grafted Nanoparticle-Stabilized 홁 Droplets under Compression
49	**PO-AA-85**	85	Hyunkyung Choo	A Topology-Aware Multiscale Surrogate for Long-Time Dynamics of Entangled Polymer Melts
50	**PO-AA-96**	96	Hannes Holey	Multiscale Simulation of Lubricated Nanoasperity Contacts
51	**PO-AA-112**	112	Daniele Lanzoni	Learning stochastic dynamics with generative adversarial networks: quantitative reproduction of lattice kinetic Monte Carlo simulations of surface dynamics
52	**PO-AA-137**	137	Seungchang Han	Many-Body Effects on the Coverage-Dependent CO Adsorption on Cu(111)
53	**PO-AA-140**	140	Suyeon Yoo	Potential-Dependent Kinetic Modeling of Electrochemically Induced Cu Surface Reconstruction
54	**PO-AA-152**	152	Sachin Rangaswamy	AI-Augmented Multiscale Digital Workflow for TCP Phase Risk Prediction and Alloy Optimisation in Directed Energy Deposition: A Bayesian Framework Connecting DFT, CALPHAD, and CFD
55	**PO-AA-204**	204	Chanjin Kim	Machine-Learning-Driven Exploration of Copper Oxide Precursor Evolution under Reducing Conditions
56	**PO-AA-355**	355	Alexander Whittle	Markov-Switching VAR for Molecular Dynamics Surrogate Modelling
57	**PO-AA-411**	411	Marvin Poul	landau: an open source library for thermodynamic equilibria
58	**PO-AA-542**	542	Seonghwan Kim	CALPHAD-Guided Prediction of Hot-Deformation Behavior in Steels

59	**PO-AA-550**	550	Eun Ha Shin	AI Agent for Inverse Estimation of Defect Parameters in Perovskite Solar Cells Using J–V Curves
60	**PO-AA-745**	745	Raynol Dsouza	A generalized mean-field bond model for anharmonic thermodynamics of complex crystals
61	**PO-IM-133**	133	Soomin Kim	Influence of High-Energy Ball Milling on the Thermal and Mechanical Behavior of Ti–Nb Alloys
62	**PO-IM-162**	162	Jaehun Kim	Microstructural Evolution and Strain Partitioning during TRIP Behavior Investigated by Micro DIC, In Situ EBSD, and CPFEM
63	**PO-IM-225**	225	Rikuto Hori	Three-dimensional fracture-mechanics analysis of hydrogen-assisted cracking in metastable austenitic stainless steel by in-situ synchrotron nano-tomography
64	**PO-IM-538**	538	Siwon Park	Unveiling the Role of Te Lone-Pair States in Amorphous Te-based Ovonic Threshold Switching Device for Energy-Efficient Neuromorphic Applications
65	**PO-IM-560**	560	Daichi Tanaka	Identification of Critical Resolved Shear Stresses (CRSSs) for polycrystalline as-cast Mg-Zn-Y alloys based on lattice strain development
66	**PO-IM-600**	600	Hyunyoung Park	Short-Range Ordered GP Zones in Al-4Cu Alloy Analyzed by Mechanical Testing and Multi-Zone Axis TEM
67	**PO-IM-752**	752	BHANU PRATAP SINGH	Exercising a differential latent hardening approach for comprehending the temperature dependent evolution of crystallographic texture in high nitrogen steels
68	**PO-HM-111**	111	Jiwon Lee	Strengthening behavior of aluminum matrix composites containing hybrid reinforcements
69	**PO-HM-194**	194	chunye ma	Microscopic Kinetics of Water Adsorption in Metal-organic Frameworks
70	**PO-HM-202**	202	Yuanyuan Wang	Low-grade Heat driven Ion Transport through 2D MXene Channels
71	**PO-ME-51**	51	Suehaeng Sung	Impact of Activation Energy Uncertainty on Chemical Reaction Networks
72	**PO-ME-101**	101	Shunji Tanaka	Data assimilation between continuum phase-field and atomistic phase-field-crystal simulations for accurate Ostwald ripening prediction
73	**PO-ME-130**	130	Ayano Yamamura	Data assimilation for determining interfacial energy anisotropy and polycrystalline orientations from dendrite growth morphologies in hexagonal alloys
74	**PO-ME-279**	279	Park Yong-Wook	Latent diffusion on concentration fields for microstructure generation with sub-1% minority phases
75	**PO-ME-281**	281	Do-Hyun Kim	Phase-field-based electrochemical potential mapping for galvanic corrosion prediction in Mg–Ca–Zn alloys
76	**PO-ME-285**	285	Jinhyun Bang	Voxel-CNN Surrogate for Microstructure-Dependent P–E Hysteresis in HZO Ferroelectrics, Verified by Phase-Field Simulation
77	**PO-ME-294**	294	Changhyeon Han	Phase-field topology optimization of periodic cross-lattice cells incorporating crystallographic elastic anisotropy of the base alloy
78	**PO-ME-381**	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
79	**PO-ME-513**	513	Xuezhou Wang	Modelling the role of impurity trapping in excess vacancy evolution and its influence on age hardening behaviors in multicomponent aluminium alloys
80	**PO-ME-658**	658	Hideto Nishikawa	Phase-field modeling of metal nanowire growth driven by stress-induced diffusion and grain boundary kinetics
81	**PO-ME-721**	721	Nan Wang	A general parameterization for one-component phase field crystal model

Poster Presentation 2: 13:00-15:00, Nov 11 (Wed), 2026

#	Presentation No.	Abstract ID	Presenter	Title
1	**PO-AM-145**	145	Heting Liao	Charge-Density-Guided Equivariant Graph Neural Networks for Small-Data and Out-of-Domain Energy Prediction
2	**PO-AM-219**	219	Kazuki Sasakawa	Machine learning model trained using phase-field simulation data for predicting 3D microstructures from 2D cross-sectional images
3	**PO-AM-257**	257	Hamidreza Razavi	Physics-Informed Graph Neural Networks for Long-Horizon Microstructure Evolution Forecasting
4	**PO-AM-275**	275	Seongu Han	AI-assisted composition design of Fe-based soft magnetic alloys via semi-supervised active learning
5	**PO-AM-282**	282	Kyungwhan Lee	Experimental-Based Construction of a Combinatorial Dataset for Machine Learning Alloy Design
6	**PO-AM-289**	289	Jihoo Kim	Chemically Intuitive Equivariant Graph Neural Networks for Directional Property Learning
7	**PO-AM-327**	327	Seo-Hui Park	Multi-Objective Active Learning for Accelerated Design of C14 Laves-Type $TiMn_2$-Based High-Entropy Alloys for Hydrogen Storage.
8	**PO-AM-621**	621	Young-Kwang Kim	An Ontology-Based Knowledge Graph Approach for Materials and Process Optimization under Data-Scarce Conditions.
9	**PO-AM-718**	718	Propad Y.V.	EnvXGen: the open-source framework for crystal structure prediction with fixed structural environment
10	**PO-AM-736**	736	Taegyun Lee	AI-Driven Inverse Design for New Superconductor Discovery
11	**PO-MD-13**	13	Alexandre Bergero	Machine-learning interatomic potential for deposition and sputtering of WB inside fusion reactors
12	**PO-MD-132**	132	Dianwei Hou	Machine-learning simulations predict graphene is hydrophobic and not wetting transparent
13	**PO-MD-144**	144	Yakov Mkrtchyan	On the possibility of phase transition in liquid selenium from molecular dynamics
14	**PO-MD-192**	192	Norikazu Miyagawa	Impact of polycrystalline model construction methods on molecular dynamics-based mechanical property evaluation
15	**PO-MD-217**	217	Matthew Harris	Bootstrapped MACE potential for nitrogen vacancy driven phase stability in high entropy nitrides
16	**PO-MD-236**	236	Durga Prasanth Dude	Atomistic Insights into the Kinetics of Copper Oxide Deoxidation via Hydrogen: A Reactive Molecular Dynamics Study
17	**PO-MD-258**	258	Shuto Araki	DeepMD Study of Exfoliability in Remote-Epitaxial SiC Films on Graphene
18	**PO-MD-260**	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
19	**PO-MD-303**	303	Jiei Taniguchi	Effect of Cooling Rate on STZ Core Formation in Cu–Zr Metallic Glasses
20	**PO-MD-342**	342	Rin Ohta	Unveiling Plastic Deformation Units in Glassy Silica
21	**PO-MD-516**	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
22	**PO-MD-523**	523	Sakuto Taya	Analysis of the Microscopic Deformation Mechanisms of Antigorite by Molecular Dynamics Using a Machine-Learning Potential
23	**PO-MD-527**	527	Yifeng Xie	Dislocation-driven active learning interatomic potentials for Cantor's high-entropy alloys in spin-dynamics-coupled molecular dynamics
24	**PO-MD-532**	532	Dario Ferrando	A Martini 3 coarse-grained model of graphene oxide
25	**PO-MD-725**	725	Taisei Ueda	Self-Assembly and Shear Response of Confined Patchy Nanoplates: Hybrid MD–Mesoscale Hydrodynamic Simulations
26	**PO-MD-738**	738	Patrick Burr	Quantitative phase analysis using global structural signatures in molecular dynamics simulations
27	**PO-MD-742**	742	Qi Wang	From Hydration Structure to Catalytic Electrode: Molecular Dynamics Insights into Cr3+ Dissociation for Enhanced Iron-Chromium Flow Battery Performance

28	**PO-MD-747**	747	Faith Kporha	Atomistic Modeling of Deuterium Sputtering from Deuterium-Decorated Tungsten Surfaces
29	**PO-MD-748**	748	Heidi Laitinen	Effects of Diffusion Processes on Atomic Ordering in Mo-Nb-Ta-V-W Thin Films
30	**PO-FD-252**	252	Sreya Viswanathan	Calculation of electronic stopping of self-ions in copper: from first principles to a dissipative molecular dynamics model
31	**PO-FD-569**	569	minyu kang | jaebok Seol	Effect of Ni content on retained Austenite Characteristics and cryogenic Tensile Behavior of High-Ni Steels
32	**PO-FD-579**	579	WonChan Lee	Integrated Atomistic Modeling and Microstructural Characterization of Orientation-Dependent Corrosion in Pure Nickel Exposed to $NaCl–MgCl_2$ Molten Salt
33	**PO-FD-603**	603	An JeongHo	Nanoscale Electric Double Layer Modeling at the Metal/Molten Chloride Interface Using MOOSE
34	**PO-FD-664**	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
35	**PO-FD-722**	722	Thierry Auger	Solid-liquid interfaces and energetic criterium in Liquid Metal Embrittlement
36	**PO-FD-730**	730	Xiaolin Li	Synergistic enhancement of hydrogen embrittlement resistance from room to cryogenic temperatures in FeMnCoCrNbC High-Entropy Alloy via precipitation and heterogeneous microstructure
37	**PO-DD-55**	55	Milind Singh	Optimizing the Microstructure and Texture for a Given 6xxx Series Al Alloy Under Tensile Loading Conditions Using Crystal Plasticity
38	**PO-DD-191**	191	Yangen Li	Origin of plastic anisotropy in BCC metals from dislocation energy landscape
39	**PO-DD-363**	363	Seungyun Kim	Development of a Machine Learning Interatomic Potential for Atomistic Simulations of Radiation Damage Processes in Nb3Sn
40	**PO-DD-468**	468	Ryo Kobayashi	Unified Modeling of Lattice Defects Based on Differential Geometry and Topology
41	**PO-DD-511**	511	Matthew Lloyd	Kinetic Monte Carlo Modelling of Solute and Vacancy Diffusion in Tungsten Alloys during Thermal Aging and Irradiation
42	**PO-DD-548**	548	Spencer Fajardo	Linking Shear Transformation Zones to Features of the Local Yield Surface in Simulated Metallic Glasses
43	**PO-DD-557**	557	Matthew Maron	Coupled Cluster and Dislocation Dynamics Modeling of Microstructure Evolution in Irradiated Materials
44	**PO-DD-558**	558	黄隆州	Comparison of topological defects in crystalline and amorphous solids
45	**PO-DD-595**	595	Kazuhiko EMA	First-Principles Analysis of Slip Deformation Behavior in ω-Ti
46	**PO-DD-617**	617	Ting Lei	Selection Rule for Stable Schwarz Nanocrystals from a Super-Bravais Lattice Framework
47	**PO-DD-683**	683	Nana WANG	Effect of Sc Element on the Microstructure and Mechanical Propertites of Al-Zn-Mg Alloys
48	**PO-DD-698**	698	Seunggyu Hong	Creep Damage Evolution in Compositionally Modified Haynes 282-Based Ni Superalloys
49	**PO-DD-699**	699	Seong Hyeon Yang	Effect of Sn Addition on Precipitation Behavior and Mechanical Properties of Al–4Cu–1.5Mg Casting Alloys
50	**PO-DD-754**	754	Abinash Pradhan	Microstructural evolution and fracture characteristics during Creep deformation of 16Cr-ODS Steel
51	**PO-MN-58**	58	Jingya Zhang	Composition-dependent dislocation mobility in FeNiCrCoCu high-entropy alloys based on atomistic simulations and machine learning analysis
52	**PO-MN-319**	319	Won-Gyu Choi	DFT-Based Theoretical Modeling of Interfacial Adhesion Energy between Cu and (Mo,Nb) Alloys for Enhanced Mechanical Reliability
53	**PO-MN-356**	356	Ruben Escobar	VACANCY-DIFFUSION MOTIVATED CREEP IN BCCS AND RHEAS
54	**PO-MN-418**	418	Colin Gerlach	Constitutive Material Model Parameter Optimization for Structural Fusion Materials
55	**PO-MN-731**	731	Hun-Min Jo	Density functional theory study on the role of ternary alloying elements in Ti-Nb-based shape memory alloys
56	**PO-MN-734**	734	Muhannad AL-Sindhi	When segmented/fragmented structures become materials
57	**PO-MH-200**	200	Fengping Luo	Hydrogen regulated synergistic nanocavity evolution in metals: multiscale studies and physical mechanisms for material failure
58	**PO-MH-209**	209	Fan-Shun Meng	Effect of Carbon on Defect Generation and Accumulation in Polycrystalline α-Iron under Hydrogen Environments

59	**PO-MH-305**	305	Jeongeun Park	Magnetism-Driven Surface Energetics in TiFe: Implications for Hydrogen Storage
60	**PO-MH-371**	371	Seongbeen Lee	Machine-Learning-Assisted Modeling of Hydrogen Diffusivity in Zirconium under Temperature and Anisotropic Strain Conditions
61	**PO-MH-693**	693	Changhun Kim	Effective Carbide Interface Engineering to Mitigate Hydrogen Embrittlement: A First-Principles Study
62	**PO-MH-696**	696	Seungyoun Jo	Mitigating Hydrogen Embrittlement by Solute Segregation in Austenite/Ferrite Interfaces: Using First Principles Study
63	**PO-MP-74**	74	Ronan MADEC	Slip System Interaction Strengths in Beryllium: A Dislocation Dynamics Study
64	**PO-MP-93**	93	Gensei Kobayashi	Phase-field modeling and simulations of solid fragmentation during solidification coupled with crystal plasticity and grain boundary evolution
65	**PO-MP-135**	135	Akihiro Niwa	Molecular dynamics study of solid fragmentation in a semi-solid state near the melting temperature
66	**PO-MP-138**	138	Jiarui Zhang	Unified constitutive model of body-centered cubic metals informed by discrete dislocation dynamics
67	**PO-MP-297**	297	Shunsuke Kobayashi	A Material-Time Manifold Framework for Continuum Dislocation Dynamics: Theory and Finite Element Analysis
68	**PO-MP-362**	362	Amani Hendricks	A Unified Constitutive Framework for Vanadium Alloys Under Fusion-Relevant Conditions
69	**PO-MP-498**	498	Shuya Hasegawa	Quantitative evaluation of intra-granular heterogeneous deformation in magnesium alloys with basal texture using polycrystal analysis models
70	**PO-MP-526**	526	HUANG Yuntong	Phase-Field Modeling of Grain-Boundary Grooving with Tunable Misorientation-Dependent Energy
71	**PO-MP-571**	571	Won Hui Jo	Multiscale deformation behavior and defect evolution of heterogeneous martensitic constituents in ultra-low-carbon dual-phase steel
72	**PO-MP-673**	673	Geon-Woo Baek	Effect of Oxygen Content on Microstructure and Defect Characteristics of Directed Energy Deposited CoCrFeMnNi High-Entropy Alloy
73	**PO-MP-737**	737	Takayuki Shiraiwa	Experimental Benchmarks for Multiscale Modeling of Localized Plasticity: From Slip-Band Strain Fields to Ultrafast Twin Propagation
74	**PO-DK-14**	14	Mohammad Alabdullah	Multiscale Viscoplastic Assessment of Eurofer97 Blanket Modules under Cyclic Pulsed Loading and Irradiation
75	**PO-DK-417**	417	Taeyean Kang	Influence of Cu Concentration and Ultrasonic Processing on the Microstructural Evolution and Magnetic Performance of Fe-Based Soft Magnetic Alloy Ribbons
76	**PO-DK-700**	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
77	**PO-DK-701**	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
78	**PO-TM-273**	273	Ryo Kobayashi	Molecular-simulation investigation on Li segregation at grain boundary in LLZO
79	**PO-TM-726**	726	Nuojin Wang	From Atomic-Scale Interfacial Anisotropy to Ordered Dendrite Splitting in Ni–Nb Alloys
80	**PO-TM-727**	727	Ziyi Xiong	Incoherent Interfacial Energy from first-principles
81	**PO-DS-165**	165	Yves Ferro	Multiscale Modeling of Hydrogen and Irradiation Effects in Transmuted W-Re Alloys
82	**PO-DS-368**	368	Harsh Dudhatra	A Probabilistic Discrete Dislocation Dynamics Framework for Modeling Large scale Obstacle-Induced Hardening in Irradiated Tungsten