

2011 MRS FALL MEETING SESSION LOCATOR

SYMP.	TITLE	LOCATION	MONDAY, NOVEMBER 28			TUESDAY, NOVEMBER 29		
			a.m.	p.m.	eve.*	a.m.	p.m.	eve.*
A	Material Challenges in Current & Future Nuclear Technologies	Independence West (Sheraton)	A1: Nuclear Fuels I	A2: Radiation Damage—Ceramics		A3: Nuclear Fuels II	A4: Radiation Damage—Metals A5: Metallic Systems—Modeling	
B	Advanced Materials for Fuel Cells	Constitution B (Sheraton)	B1: PEM Membranes I B2: PEM Materials I	B3: Proton-Conducting Ceramic Fuel Cells B4: SOFC Thin Films & Surfaces	B5: Posters	B6: PEM Theory B7: PEM Electrodes I	B8/C5: SOFC Materials Characterization I	B9: Posters
C	<i>In Situ</i> Studies of Solid-Oxide Fuel-Cell Materials	Republic A (Sheraton)	C1: <i>In Situ</i> Studies of SOFCs I	C2: <i>In Situ</i> Studies of SOFCs II	C3: Posters	C4: SOFC Cathodes	C5/B8: SOFC Materials Characterization I (Constitution B)	
D	Sustainable Synthesis of Nanomaterials	Back Bay B (Sheraton)				D1: Bio-inspired Approaches D2: Synthetic Approaches	D3: Nanomaterials/Composites D4: Nanomaterials/Metals	
E	Advanced Materials for Solar-Fuel Generation	Back Bay A (Sheraton)	E1: New Architectures & New Catalysts for Solar-Fuel Generation	E2: New Catalysts & New Compounds for Solar-Fuel Generation I	E3: Posters	E4: New Architectures & New Analysis Techniques for Solar-Fuel Generation	E5: New Catalysts & New Compounds for Solar-Fuel Generation II	E6: Posters
F	Mobile Energy	Back Bay C (Sheraton)	F1: New Energy Systems I	F2: New Energy Systems II F3: Mobile Systems & Solid-State Ionics	F4: Posters	F5: Cathodes I	F6: Cathodes II F7: Advanced Batteries I	
G	Applications of Hierarchical 3D Structures	Back Bay D (Sheraton)				G1: 3D Fabrication Methods—Top-Down Approaches	G2: 3D Fabrication Methods—Self Assembly	G3: Posters
H	Organic Photovoltaic Devices & Processing **Tutorial	Grand Ballroom (Sheraton)	H1: New Materials & Processing	H2: Interfaces & Contacts	H3: Posters	H4: Degradation & Lifetime	H5/I5: Materials	
I	Fundamental Processes of Solar Harvesting in Excitonic Solar Cells **Tutorial	Liberty (Sheraton)	I1: Recombination	I2: Morphology I I3: Hybrid		I4: Excitons & Transport	I5/H5: Materials (Grand Ballroom-S)	
J	Photonic & Plasmonic Materials for Enhanced Photovoltaic Performance	Republic B (Sheraton)	J1: Exploring the Limits of Absorption Enhancement	J2: Novel Concepts for New Generation Photovoltaics I		J3: Novel Concepts for New Generation Photovoltaics II	J4: Dye Solar Cells	
K	Materials for High-Performance Photonics	Independence East (Sheraton)	K1: Photonics I	K2: Photonics II	K3: Posters	K4: Photonics III	K5: Photonics IV	
L	Topological Insulator Materials	Room 301 (Hynes)	L1	L2		L3	L4	
M	Oxide Semiconductors—Defects, Growth, & Device Fabrication	Ballroom C (Hynes)	M1: ZnO & Related Materials—Defects & Doping I	M2: ZnO & Related Materials—Optical Properties	M3, M4: Posters	M5: ZnO & Related Materials—Defects & Doping II	M6: (Zn, Ga, In, Sn) Oxide Thin-Film Devices	
N	Diamond Electronics & Biotechnology—Fundamentals to Applications V	Room 306 (Hynes)	N1: Plenary N2: Nitrogen Vacancy Centers in Diamond	N3: Doping & Devices N4: Diamond Nanoparticles—Properties & Applications		N5: Electron Emission N6: Biosensors & Bioelectronics	N7: Diamond Growth N8: Theory Meets Experiment	
O	Compound Semiconductors for Generating, Emitting, & Manipulating Energy	Room 304 (Hynes)				O1: III-Nitride LEDs	O2: Optoelectronics	
P	Ferroelectric & Multiferroic Materials **Tutorial	Room 302 (Hynes)	P1: Coupled Ferroic Instabilities	P2: Structure & Dynamics of Ferroelectric Domains P3: BiFeO ₃ & the Morphotropic Phase Boundary	P4: Posters	P5: Magnetolectric Multiferroics P6: Control of Ferroic Order via Oxide Interfaces	P7: Magnetolectric Interfaces P8: Integrating Oxides on Semiconductors	P9: Posters
Q	Magnetolectric Composites	Room 303 (Hynes)	Q1: Magnetolectric Laminates I Q2: Magnetolectric Applications	Q3: Converse Magnetolectric Effect Q4: Magnetolectric Composites	Q5: Posters	Q6: Thin-Film Magnetolectric Sensors Q7: Modulated Sensors/Zero Bias	Q8: CFO/BFO or BTO Composites Q9: Magnetolectric Thin-Film Composites	

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R	Compliant Electronics & Photonics	Room 308 (Hynes)				R1: Novel Materials for Stretchable Electronics & Photonics R2: Mechanics of Stretchable Electronics & Photonics	R3: Stretchable Electrodes & Interconnects R4: Stretchable Electronic Components & Circuits	R5: Posters
S	Solution Processing of Inorganic & Hybrid Materials for Electronics & Photonics	Room 310 (Hynes)				S1: Solution-Processed Chalcogenides for Thin-Film Photovoltaic Devices	S2: Solution-Processed Oxides	S3: Posters
T	Large-Area Processing & Patterning for Active Optical & Electronic Devices III	Room 300 (Hynes)	T1: Thin-Film Transistors	T2: Patterning & Deposition		T3: Conductors & Electrodes	T4: Devices & Systems	T5: Posters
U	Charge Generation/Transport in Organic Semiconductor Materials <i>**Tutorial</i>	Room 311 (Hynes)	U1: Thin-Film Transistors I	U2: Organic Semiconductors for Charge Transport		U3: Optical & Electronic Properties	U4: Device Physics	
V	Multifunctional Polymer-based Materials	Room 312 (Hynes)	V1: Multifunctional Surfaces & Interfaces I V2: Stimuli-Sensitive & Shape-Memory Polymers I	V3/KK2: Cell-Biomaterials Interactions		V4: Multifunctional Surfaces & Interfaces II V5: Multifunctional Biomaterials	V6: Liquid Crystalline Polymers I V7: Micro-/Nano-structured Systems I	
W	Phonons in Nano-materials— Theory, Experiments, & Applications	Room 313 (Hynes)	W1: Phonon Modes & Dispersion Relations	W2: Phonon Scattering		W3: Phonon Transport—Bulk Materials	W4: Phonon Transport—Thermoelectric Materials	
X	Frontiers of Materials Research	Grand Ballroom (Sheraton)		X1			X2	
Y	Advances in Energetic Materials Research	Room 309 (Hynes)	Y1: Synthesis, Formulation & Characterization Y2: Ultrafast Dynamics & Diagnostics	Y3: Detection, Imaging, & Sensing Y4: Thermites & Nanoenergetics		Y5: High-Energy Density & Storage Y6: Initiation, Ignition, & Detonation I	Y7: Thermodynamic, Chemical, & Mechanical Properties Y8: Initiation, Ignition, & Detonation II	Y9: Posters
Z	Functional Metal-Oxide Nanostructures <i>**Tutorial</i>	Room 210 (Hynes)	Z1: Synthesis of Nano-oxides Z2: Nano-oxides for Photocatalysis & Water Splitting I	Z3: Electrical Properties I Z4: ZnO Functional Nanostructures I	Z5: Posters	Z6: Electrical Properties II Z7: Chemical Sensors I	Z8: Photoelectrochemical Systems I Z9: Synthesis of Nanostructured Oxides	
AA	Carbon Nanotubes, Graphene, & Related Nanostructures	Ballroom B (Hynes)	AA1: Synthesis of Carbon Nanostructures I AA2: Growth Mechanism	AA3: Synthesis of Carbon Nanostructures II AA4: Spectroscopy & Microscopy I	AA5: Posters	AA6: Synthesis of Carbon Nanostructures III AA7: Spectroscopy & Microscopy II	AA8: Theoretical Investigation AA9: Electrical Properties I	AA10: Posters
BB	Functional Nanowires & Nanotubes <i>**Tutorial</i>	Ballroom A (Hynes)	BB1: Photovoltaics & Solar Energy I BB2: Nanowires Growth I	BB3: Photovoltaics & Solar Energy II BB4: Optical Properties I	BB5: Posters	BB6: Lithium-Ion Battery BB7: Optical Properties II	BB8: Nanowire Growth II BB9: Sensing Devices	BB10: Posters
CC	Functional Semiconductor Nanocrystals & Metal-Hybrid Structures	Room 207 (Hynes)	CC1: Optical, Electronic, & Magnetic Functionalities Using Novel Semiconductor Nanocrystal Synthesis	CC2: Interaction in Coupled Metal & Semiconductor Nanostructures I		CC3: Surface Plasmon Polaritons in Metals & Semiconductors	CC4: Investigations of Novel Physical Phenomenon in Devices I	CC5: Posters
DD	Transport Properties in Polymer Nanocomposites II	Room 201 (Hynes)	DD1: Electrically Conductive Nanocomposites	DD2: Multifunctional Nanocomposites (Antiflammable, Antireflective, etc.) DD3: Nanocomposite Membranes & Barriers	DD4: Posters	DD5: Nanocomposite Sensors DD6: Ionic/Proton Conductivity I	DD7: Ionic/Proton Conductivity II DD8: Nanocomposites for Energy Applications	
EE	Self Organization & Nanoscale Pattern Formation	Room 200 (Hynes)	EE1: Self Assembly I	EE2: Self Assembly II EE3: Principles of Self Organization I		EE4: Nanoporosity	EE5: Nanowires & Nanostructures	EE6: Posters

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	a.m.	p.m.	eve.*	a.m.	p.m.	eve.*	a.m.	p.m.
R	R6: Soft Actuators R7: Bio-Integration with Stretchable Electronics	R8: Flexible & Stretchable Photonics I R9: Flexible & Stretchable Photonics II						
S	S4: Inkjet Printing & Layered Deposition	S5: Solution-Processing Approaches to Printed Electronics	S6: Posters	S7: Solution Processing with Nanoparticles	S8: Solution-Processed Organic-Inorganic Hybrids			
T	T6/H6: Solar Cells T7/H7: Large OPV (Grand Ballroom-S)							
U	U5: Organic Single-Crystalline Structures & Properties	U6: Surface Morphology & Interface Characterization U7: Organic Single-Crystalline Structures & Transistors	U8: Posters	U9: Organic/Polymer Structure-Property U10: Materials for Transport & Optoelectronics	U11: Single-Crystalline Semiconductors U12: Materials Patterning, Printing, Processing	U13: Posters		
V	V8: Liquid Crystalline Polymers II V9: Micro/Nano-structured Systems II	V10: Stimuli-Sensitive & Shape-Memory Polymers II V11: Multimaterial Systems	V12: Posters	V13: Stimuli-Sensitive & Shape-Memory Polymers III V14: Encapsulation & Drug Release	V15: Stimuli-Responsive Hydrogels V16: Photosensitive Materials	V17: Posters	V18: Dielectric & Electronic Systems (Room 202-H)	
W	W5: Phonon Transport—Nanomaterials I	W6: Phonon Transport—Nanomaterials II	W7: Posters	W8: Phonon Transport—CNTs & Graphene	W9: Phonon Techniques & Devices		W10: Phononics & Coherent Acoustics (Room 201-H)	
X		X3			X4			
Y	Y10: Thermal & Shock Processes Y11: Energetic Formulations & Applications							
Z	Z10: Nano-oxides for Energy Storage I Z11: Photoelectrochemical Systems II	Z12: ZnO Functional Nanostructures II Z13: Chemical Sensors II		Z14: Synthesis of Nano-oxides Z15: ZnO Functional Nanostructures III	Z16: Photoelectrochemical Systems III Z17: Nano-oxides for Energy Storage II	Z18: Posters	Z19: Nano-oxides for Photocatalysis & Water Splitting II Z20: Sensing Properties (Room 207-H)	
AA	AA11: Electrical Properties II AA12: Noncarbon Nanostructures	AA13: Mechanical Properties I AA14: Energy & Electrochemistry I	AA15: Posters	AA16: Mechanical Properties II AA17: Energy & Electrochemistry II	AA18: Biological & Chemical Properties I AA19: Biological & Chemical Properties II	AA20: Posters	AA21: Optical Spectroscopy & Properties I AA22: Optical Spectroscopy & Properties II (Room 210-H)	
BB	BB11: Thermoelectric Applications BB12: Nanowire Growth III	BB13: Energy Harvesting I BB14: Nanowire Growth IV	BB15: Posters	BB16: Optical Properties III BB17: Nanowire Devices	BB18: Electronic Transport BB19: Energy Conversion & Storage	BB20: Posters	BB21: Hybrid Systems BB22: Inorganic Nanowires & Nanotubes (Room 200-H)	
CC	CC6: Spectroscopic Studies in Semiconductor & Metal-Hybrids I (Room 202-H) CC7/K6	CC8: Interactions in Coupled Metal & Semiconductor Nanostructures II (Room 202-H) CC9/K7	CC10: Posters	CC11: Spectroscopic Studies in Semiconductor & Metal-Hybrids II	CC12: Investigations of Novel Physical Phenomenon in Devices II	CC13: Posters		
DD								
EE	EE7: Self Organization by Energetic Beams	EE8: Nanoparticles	EE9: Posters	EE10: Surfaces & Thin Films	EE11: Principles of Self Organization II			

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FF	Mechanical Nanofabrication, Nanopatterning, & Nanoassembly	Room 202 (Hynes)	FF1: Nanoimprint Fabrication Methods	FF2: Assembly by Adhesive Transfer & Other Mechanical Techniques		FF3: Scanning Probe Fabrication I	FF4: Fluidic & Directed Self Assembly Techniques	
GG	Safety & Toxicity Control of Nanomaterials	Room 209 (Hynes)					GG1: Nanosafety I	
HH	Bioelectronics—Materials, Properties, & Applications	Room 204 (Hynes)				HH1: DNA Bioelectronics HH2: Biomaterials & Applications	HH3: Proteins	HH4: Posters
II	BioMEMS—Materials & Devices	Room 206 (Hynes)	II1: Microfluidics for Cellular Micro-environments I	II2: Clinical Diagnostic Devices	II3: Posters	II4: Microfluidics for Cellular Micro-environments II	II5: BioMEMS Tools for Cell Mechanics	
JJ	Nanofunctional Mats., Nanostructures, & Nanodevices for Cancer Applications	Room 203 (Hynes)	JJ1: Detection of Biomarkers & Biological Response	JJ2: Imaging & <i>In-vivo</i> Detection Using Nanoparticles		JJ3: Bio-Nanomaterial for Cancer I	JJ4: Nanotechnology-Enabled Drug Delivery & Therapy	JJ5: Posters
KK	Biomaterials for Tissue Regeneration	Room 102 (Hynes)	KK1: Advanced Scaffold Design	KK2/V3: Cell-Biomaterial Interactions (Room 312-H)	KK3: Posters	KK4: Soft Tissue Regeneration	KK5: Hard Tissue Regeneration	KK6: Posters
LL	Synthetic & Biological Gels	Room 101 (Hynes)	LL1: Nanoparticles & Gels	LL2: Design of Functional Polymer Gels	LL3: Posters	LL4: Bioactive Gels & Tissue Repair	LL5: Physical Gels & Self Assembly	LL6: Posters
MM	Micro- & Nanoscale Processing of Biomedical Materials	Room 103 (Hynes)	MM1	MM2	MM3: Posters	MM4	MM5	
NN	Nucleation & Growth of Biological & Biomimetic Materials	Room 104 (Hynes)				NN1: Nucleation & Prenucleation in Biomineralization	NN2: Nanoparticles & Nanocomposites	NN3: Posters
OO	Multiscale Mechanics of Hierarchical Materials	Room 208 (Hynes)	OO1: Living Systems I	OO2: Living Systems II OO3/SS4: Living Systems III—Nano- & Submicron Mechanical Testing (Constitution A)		OO4: Living Systems IV	OO5: Synthesis & Characterization I	OO6: Posters
PP	Three-Dimensional Tomography of Mats. **Tutorial	Fairfax A (Sheraton)	PP1	PP2	PP3: Posters	PP4	PP5	PP6: Posters
QQ	Functional Imaging of Materials—Advances in Multifrequency & Multispectral Scanning Probe Microscopy & Analysis	Room 305 (Hynes)	QQ1: Probing near Surface Fields, Electrostatic, & Magnetic Nanoscale Properties	QQ2: Probing Ionic & Electronic Properties on the Nanoscale		QQ3: Nanomechanical Properties through Advanced Scanning Probe Microscopy I	QQ4: Nanomechanical Properties through Advanced Scanning Probe Microscopy II	
RR	Dynamics in Confined Systems & Functional Interfaces	Commonwealth (Sheraton)	RR1: Tribology	RR2: Interfaces in Mechanics RR3: Defect & Oxygen Dynamics near Interfaces I	RR4: Posters	RR5: Defect & Oxygen Dynamics near Interfaces II	RR6: Dynamics in Porous Media	
SS	Properties & Processes at the Nanoscale—Nanomechanics of Material Behavior	Constitution A (Sheraton)	SS1: Mechanical Behavior of Nanoporous Materials SS2: Size Effects—Deformation & Fracture	SS3: Polymers & Fibers SS4/OO3: Living Systems III—Nano- & Submicron Mechanical Testing		SS5: Micromachined Structures for Nanoscale Property Measurements	SS6: One-Dimensional Structures—Single & Aggregate Properties	SS7: Posters
TT	Microelectromechanical Systems—Materials & Devices V	Gardner (Sheraton)	TT1: Devices & Processing—Si & Non-Si	TT2: Experimental Techniques & Mechanical Properties		TT3: ADL, Complex Lithography & Adhesion	TT4: Contact Mechanics & Active MEMS Materials	TT5: Posters
UU	Combinatorial & High-Throughput Methods in Materials Science **Tutorial	Hampton (Sheraton)	UU1: Applications to Electronic Materials	UU2: Accelerated Methods for Preparation & Characterization		UU3: Applications in Polymeric & Biological Systems	UU4: Applications in Catalysis & Batteries	UU5: Posters

***Posters: All Evening Posters Located in Exhibition Hall D (Hynes)**

****Refer to Tutorial Schedule**

Shaded Blocks: No Session

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FF	FF5: Scanning Probe Fabrication II (Room 201-H)	FF6/SS10: Fundamentals of Mechanical Nanofabrication (Constitution A-S)	FF7: Posters	FF8: Mechanical Instability & Beam-Based Assembly Techniques				
GG	GG2: Nanosafety II	GG3: Nanosafety III	GG4: Posters	GG5: Nanosafety IV				
HH	HH5: Charge Transfer, Spectroscopy, & Devices	HH6: Cellular Bioelectronics HH7: Energy Harvesting Biomaterials & Devices						
II	II6: Functional Materials for High-Throughput Studies	II7: Materials & Devices for Implantable Systems		II8: Microfluidics for Cellular Studies III	II9: Biosensors & Detection Technologies			
JJ	JJ6: Nucleic Acids in Detection & Drug Delivery	JJ7: Bio-/Nanomaterials for Cancer II						
KK	KK7: Advances in Tissue Engineering	KK8: Applications & Medical Devices						
LL	LL7: Theory & Modeling	LL8: Synthesis & Characterization of Polymer Networks		LL9: Responsive Gels & Biosensors				
MM	MM6	MM7		MM8	MM9	MM10: Posters	MM11 (Room 206-H)	
NN	NN4: Organic/Inorganic Interfaces	NN5: Self Assembly in Biological & Biomimetic Systems						
OO	OO7: Carbon I	OO8: Carbon II		OO9: Modeling I	OO10: Modeling II			
PP	PP7	PP8						
QQ	QQ5: Probing Photonic, Thermal, & Chemical Properties on the Nanoscale I	QQ6: Probing Photonic, Thermal, & Chemical Properties on the Nanoscale II		QQ7: Probing Nanoscale Biofunctionality				
RR	RR7: Soft/Bio Interfaces I	RR8: Soft/Bio Interfaces II		RR9: Methods in Interfacial Science				
SS	SS8: Dislocations & Material Behavior SS9: Tribology at the Nanoscale	SS10/FF6: Fundamentals of Mechanical Nanofabrication		SS11: Characterization Techniques & Methods SS12: Nanoparticles, Nanocomposites, & Nanocrystalline Materials	SS13: Modeling & Simulation of Nanomaterials SS14: Stress Evolution & Phase Transformations	SS15: Posters	SS16: Films & Multilayers	
TT	TT6: Bio MEMS & Sensors							
UU	UU6: Informatics & Analysis	UU7: General Topics		UU8: High-Throughput Computational Studies				

*Posters: All Evening Posters Located in Exhibition Hall D (Hynes)

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