



# 1997 MRS Fall Meeting Preview

DECEMBER 1–5, Boston, Massachusetts

Boston Marriott/Copley Place, Westin Hotel/Copley Place, Sheraton Boston Hotel and Towers

Meeting Chairs: Harry A. Atwater, California Institute of Technology, Dean W. Face, DuPont, Peter F. Green, University of Texas—Austin, A. Lindsay Greer, Cambridge University

The 1997 MRS Fall Meeting demonstrates the synergy of diverse scientific communities through its 41 symposia including joint sessions and four major poster sessions. In addition to the 4,000 oral and poster presentations scheduled, an extensive exhibit, tutorials, award presentations, student activities, and other workshops round out the event. While there is a large number of technical symposia, narrowing the focus of some of them—for instance GG Functionally Graded Materials, II *In Situ* Process Diagnostics and Intelligent Materials Processing, and LL High-Thermal-Conductivity Materials: Fundamentals and Applications—gives MRS the opportunity to offer a range of new topics. The tightly enforced abstract deadline with an extra weekend given for submissions via the World Wide Web generated 64% electronic submissions, up from 19% for the Fall 1996 and Spring 1997 Meetings.

Clusters of symposia are organized by related topics. For example, representing a growing facet of MRS, soft condensed matter incorporating polymers and biomaterials will be covered in Symposia J–O. The largest component of this cluster, Symposium J, Electrical, Optical and Magnetic Properties of Organic Solid-State Materials, is a massive and growing basic research area where recent results are starting to demonstrate real applications. Growing interest in this topic has been sparked by extremely encouraging early data from exploratory demonstrations. New topics in this cluster include Materials Science of the Cell (Symposium K) and Polymers in Orthopedics (Symposium O).

Another strength of the meeting is its focus on modeling and simulation (Symposia P–S). The materials community maintains a broad consensus for the need for modeling of complex materials and structures, synthesis and processing. This new trend focused on modeling extends from the atomistic level across length scales to cover technologically oriented topics, including a new focus on Semiconductor and Device Performance Modeling (Symposium Q).

Symposia T through W cover complex oxide materials including superconduc-

tors, ferroelectric materials, magnetic materials, and synthesis and processing. The meeting comes at a critical time for ferroelectric thin films. Implementation of ferroelectrics into silicon technology is widely expected in the near term. In addition, the pursuit of ferroelectrics for integrated circuits has catalyzed research into a number of related applications.

In the area of semiconductors (Symposia D through I), a series of advanced semiconductor topics “off the SIA (Semiconductor Industry Association) roadmap” are highlighted. These include specialized advanced applications in power devices, detectors, and integrated optoelectronics on silicon. The area of nitrides for optoelectronics continues to show rapid progress as the materials move closer to critical large-volume applications such as data storage and as understanding of the materials grows deeper. Exemplifying the developments in this area, Symposium D on nitride semiconductors is prominent in the semiconductor cluster of this meeting. This symposium is dedicated to Jacques Pankove, inventor of the GaN LED while working at RCA Laboratories in the late 1960s. A plenary lecture by I. Akasaki will reminisce about Pankove’s work.

Characterization, a core focus of MRS, covers some new approaches, for instance holography (Symposium HH) and non-destructive characterization of materials in aging systems (Symposium JJ).

Another mainstay of MRS, thin-films and more recently the area of nanostructures, is represented by symposia covering morphology, microstructure, phase transformations, self-assembly, disordered films, irradiation of materials, and mechanical properties. Thin films and surface properties are increasingly important across a wide range of applications. In ceramic compaction, the surfaces of the ultrafine powders dominate behavior during sintering and other processes. On a fundamental level, quantum dots can be formed in arrays that can be adjusted continuously to change the electrical properties of such an “artificial crystal” from insulating to metallic. Symposia will highlight a number of unifying themes emerging in the study and understanding

of the physical processes involved in these areas.

Other new and revisited topics include Electrochemical Energy Storage (Symposium Y), Catalytic Materials (Symposium Z), and Advances in Materials for Cementitious Composites (Symposium MM). Symposium BB, Thermal Spray Coating, presents an opportunity to look at a particularly technologically relevant topic (applicable to aerospace, automotive, power oil and gas, and chemical communities), and try to understand the scientific issues behind it, starting first by measuring and understanding the role of parameters such as particle size, velocity, and temperature. This symposium is complemented by Symposium CC on Particulate Coatings. Symposium DD gives a critical overview of the area of materials under high pressure, which has continued to evolve since last covered at MRS.

The final symposium in the program, Symposium OO, is a two-day workshop on materials education covering innovative curricula and courses, visualization and interactive learning through use of computers, and teaching assessment. Tuesday and Wednesday morning sessions both end with panel discussions, one on needs and opportunities in materials education and the other on core curriculum to make a materials professional.

Symposium X, Frontiers of Materials Research, presents a series of authoritative reviews for the nonspecialist. Symposium X, presented between noon and 1:30 p.m., Tuesday through Thursday, draws from the technical content of the meeting, with an emphasis on soft condensed matter and electronic materials. Specific topics cover photoresist, sea shells, genetically engineered materials, hydrogels as biosensors, switchable mirrors from metal hydrides, and the MRS Medal award talk on III-Nitride Lasers and Optoelectronic Devices.

## Special Events

The plenary session scheduled for Monday at 6:00 p.m. will feature Harry Y. McSween, Jr., professor in the Department of Geological Sciences, University of Tennessee, presenting, “Materials Research Via Mars Pathfinder.” He will

report findings from this mission based on chemical analysis with the alpha-proton-x-ray spectrometer (APXS), provided by the Max-Planck-Institut für Chemie in Germany. See the article on McSween elsewhere in this issue.

The Von Hippel Award, David Turnbull Lectureship, MRS Medal, and Graduate Student Awards will be presented at the MRS Award Ceremony Wednesday evening, December 3, at 6:00 p.m., in the Boston Marriott Hotel. After the ceremony, the **Von Hippel Award** recipient, **Gabor A. Somorjai** of the University of California—Berkeley, will give a lecture, which will be followed by a wine and cheese reception. **Merton C. Flemings** of the Massachusetts Institute of Technology will be presented with the **David Turnbull Lectureship** and **Shuji Nakamura** of Nichia Chemical Industries, Inc. will receive the **MRS Medal**. See full profiles of award recipients elsewhere in this issue.

The Society presents the **Graduate Student Award** to graduate students who are presenting significant and timely research at the 1997 Fall Meeting as an author or co-author of a symposium paper. The winners, all of whom must be presenting papers at the conference, will be chosen from Award Finalists' Special Talk Session held Monday, December 1.

The 1997 MRS Fall Meeting Chairs will

recognize the best presentations at the four evening **poster sessions** to be held in the Marriott, Sheraton, and Westin Hotels, December 1–4. A prize of \$500 will be awarded by the Chairs to the presenting author(s) of the winning paper(s) at each evening's poster session. The Meeting Chairs will select the winners on the basis of the poster's technical content, appearance, graphic excellence, and presentation quality. Winning posters will be displayed for the remainder of the meeting. Posters were honored for the first time at the 1997 MRS Spring Meeting.

Available only to meeting registrants, **symposia tutorials** will concentrate on new, rapidly breaking areas of research and are designed to encourage the exchange of information by meeting attendees during the symposium. The majority of them are planned for Sunday, November 30, with one scheduled for Tuesday, December 2.

A seminar—tentatively scheduled for Tuesday 5:30–7:30 p.m.—is planned to give an **overview of National Science Foundation (NSF) activities** in support of materials research and education, focusing primarily on the activities of the Division of Materials Research. NSF staff will give short presentations on programs, proposal submission, and the evaluation process. A question and answer session will follow. Drop-in ses-

sions are being planned later in the week for attendees to informally meet with program officers.

A major **exhibit** encompassing the full spectrum of equipment, instrumentation, products, software, publications, and services will be held Tuesday afternoon through Thursday in the Boston Marriott, Westin, and Sheraton Hotels, including a reception Tuesday evening 5:00–6:30 p.m.

For job seekers, a **career workshop** is tentatively scheduled for Tuesday, December 2, 4:30 p.m.–8:00 p.m. and a **job center** tentatively set to be available 8:00 a.m.–5:00 p.m., Tuesday through Thursday, December 2–4. A **student mixer** will be held for graduate students and members of MRS University Chapter. Also Chapter officers and faculty advisors are invited to attend a meeting of MRS University Chapter representatives to compare notes on recent activities and brainstorm on new projects and issues of common concern.

See the following pages for a matrix of symposia sessions, profiles of exhibitors, tutorial descriptions, a registration form, and other information. For a copy of the program or to register, contact MRS at 412-779-3003; fax 412-779-8313; e-mail [info@mrs.org](mailto:info@mrs.org), or see the MRS Website <http://www.mrs.org/> for information.

**MRS**

## Location, Lodging & Travel

### Hotels

A block of rooms has been reserved for MRS meeting attendees at the Boston Marriott, Westin, and Sheraton Boston Hotels. Call your preferred hotel and refer to the Materials Research Society's meeting to receive the special rates, or fax the hotel.

**DEADLINE FOR HOTEL RESERVATIONS: NOVEMBER 1, 1997**

#### **Boston Marriott/Copley Place**

110 Huntington Avenue, Boston, MA 02116  
800-228-9290; 617-236-5800 (Direct)  
Fax 617-236-5885  
Rate: \$126/Single\* • \$140/Double\*

#### **Westin Hotel/Copley Place**

10 Huntington Avenue, Boston, MA 02116  
800-228-3000; 617-262-9600 (Direct)  
Fax 617-424-7483  
Rate: \$129/Single\* • \$146/Double\*

#### **Sheraton Boston Hotel and Towers**

Prudential Plaza  
39 Dalton Street, Boston, MA 02199  
617-236-2000 (Main Desk); 617-236-2020 (Reservations)  
Fax 617-236-6095  
Rate: \$118/Single\* • \$129/Double\*

\* plus Massachusetts tax

### Alternate Lodging

A list of alternate lodging accommodations can be obtained via e-mail ([info@mrs.org](mailto:info@mrs.org)) or the MRS Website (<http://www.mrs.org/>).

### Airline Transportation

Due to recent changes in the airline industry, it is recommended you check with your preferred airline carrier or travel agent when making 1997 Fall Meeting travel arrangements.

### Local Transportation

Shuttle service to the Boston Marriott, Westin, and Sheraton Boston Hotels from Logan International Airport departs every half-hour, 7:00 a.m.–7:00 p.m., from the designated shuttle stop in front of each terminal.

There is a free shuttle from airport terminals to the airport subway station (The "T"). Copley Station is within one block of the Boston Marriott, Westin, and Sheraton Hotels on the "Green Line."

### Parking

A parking garage is adjacent to the meeting hotels.

### Child Care

Check with the Concierge Desk at the individual hotels for a comprehensive roster of licensed and bonded sitters.

# MRS 1997 FALL MEETING SESSION LOCATOR

SYMPOSIUM	LOCATION	MONDAY, DECEMBER 1			TUESDAY, DECEMBER 2		
		a.m.	p.m.	eve.*	a.m.	p.m.	eve.*
A: Evolution of Surf. Morph. & Thin-Film Microstructure	Essex Center (W)	A1: Oxide Films & Surfaces	A2: Heteroepitaxy	A3: Posters (W)	A4: Polycrystalline Texture	A5: Surface Dynamics	A6: Posters (W)
B: Phase Transform. & Sys. Driven Far From Equilibrium	America South (W)	B1: Solidification I	B2: Solidification II B3: Nucleation		B4: Microstructural Evolution & Stress Effects	B5: Solid State Transformations	B6: Posters (W)
C: Self-Organized Nanostructures	Essex West (W)						
D: Nitride Semiconductors	Salon F (M)	D1: Plenary & MOVPE I D2: MOVPE II	D3: Characterization I D4: Characterization II	D5: Posters (M)	D6: Lasing & Optical Characterization D7: TEM	D8: Selective Area Epitaxy D9: Processing	D10: Posters (M)
E: Power Semiconductor Materials and Devices	Wellesley (M)		E1: Applications for Power Electronics		E2: Diamond-Based Devices	E3: Devices & Processing	E4: Posters (M)
F: Infrared Applications of Semiconductors II	Salon J/K (M)	F1: Antimonide-Related Materials—Growth, Characterization, & Analysis	F2: Antimonide-Related Devices		F3: Innovative Infrared Devices	F4: Infrared Detectors I	F5: Posters (M)
G: Thin-Film Structures for Photovoltaics	Suffolk (M)				G1: III-V Based Thin Films	<b>Tutorial Session**</b>	
H: Materials and Devices for Silicon-Based Optoelectronics	Simmons (M)	H1: Si-Based Integr. Optoelec.—State of Art & Perspectives H2: Properties & Applications of Si Nanocrystals	H3: Waveguide Materials & Devices H4: Posters—Silicon Nanocrystals & Quantum Wells		H5: Integrated & Discrete Infrared Devices I—Light Sources H6: Integr./Discrete Infrared Dev. II—Detect., Amplif. & Modulators	H7: Devices & Matis. Prop. for Visible & Near IR Light Emiss. H8: Posters—Matis. & Devices for IR & Visible Light Emission	
I: Semiconductors for Room-Temperature Radiation Detector Applications II <i>Sunday Tutorial Session**</i>	Salon H/I (M)	I1: Cadmium Zinc Telluride Growth I2: Cadmium Zinc Telluride Characterization I—Optical Prop.	I3: Mercuric Iodide I4: Cadmium Zinc Telluride Structures I—Imagers		I5: Cadmium Zinc Telluride Fabrication & Processing I6: Cadmium Zinc Telluride Characterization II	I7: Device Modeling & Computational Studies I8: Cadmium Zinc Telluride Structures II	I9: Posters (M)
J: Electrical, Optical & Magnetic Properties of Org. Solid-State Materials IV	Salon G (M)	J1: Light-Emitting Organics	J2: Nonlinear Optical/Photorefractive Materials I	J3: Posters (W)	J4: Conjugated Polymers	J5: Supramolecular Engineering	J6: Org Metals/Magnetic Matis. SALON H/I (M)
K: Materials Science of the Cell	Grand Ballroom (S)	K1: Motility & Force Generation	K2: Cytoskeletal Polymers		K3/L3: Proteins—Adsorption & Interactions with Membranes <b>REPUBLIC B (S)</b>	K4a/L4a: Biomedical & Technological Applications <b>REPUBLIC B (S)</b> K4: Biomed. & Tech. Appl.	K5: Posters (S)
L: Complex Fluids and Biomaterials	Republic B (S)	L1: Colloidal Systems	L2: Liquid Crystals		L3/K3: Proteins—Adsorption & Interactions with Membranes	L4a/K4a: Biomedical & Technological Applications L4: Biomed. & Tech. Appl.	L5: Posters (S)
M: Adv. in Poly. Matrix Comp.-Microscopic to Macroscopic	Independence Ctr (S)	M1: Composite Synthesis & Processing	M2: Composite Tailored Interfaces		M3: Nanocomposites	M4: Fract./Percolation in Comp.	M5: Posters (S)
N: Polymers in Confined Spaces	Constitution (S)	N1: Nanocomposite Materials	N2: Dynamics of Confined Systems I		N3: Dynamics of Confined Systems II	N4: Grafted Chains	N5: Posters (S)
O: Polymers in Orthopedics	Independence W (S)						
P: Modeling Across Length Scales for Materials Development	Gardner (S)	P1: Potentials for Materials Development Through Modeling & Simulation	P2: Intermetallics—Modeling & Development		P3: Microstructure Modeling for Applications I P4: Posters	P5: Microstructure Modeling for Applications II P6: Posters	
Q: Semicond. Process & Device Perform. Modeling	Independence E (S)				Q1: Semiconductor Bulk Process Modeling I Q2: Semiconductor Bulk Process Modeling II	Q3: Posters (S)	
R: Tight-Binding Approach to Computational Mat. Science	Fairfax A (S)	R1: First-Principles Tight Binding I	R2: First-Principles Tight Binding II		R3: Semi-Empirical Tight Binding I	R4: Semi-Empirical Tight Binding II	R5: Posters (S)
S: Microscopic Simul. of Interf. Phenomena in Solids & Liq.	Commonwealth (S)	S1: Properties of Liquid Surfaces	S2: Properties of Solid Surfaces		S3: Structure of Interfaces	S4: Structure & Magnetic Properties of Interfaces	S5: Posters (S)
T: Stability of High-T <sub>c</sub> Superconductors	Salon E (M)	T1: Thin Film Applications	T2: Microwave Properties	T3: Posters (M)	T4: HTS Thin Films	T5: Josephson Junctions	
U: Ferroelectric Thin Films VI <i>Sunday Tutorial Session**</i>	Salon A/B (M)	U1: High-Permittivity Materials for DRAMs	U2: Domains & Size Effects	U3, U4: Posters (M)	U5: Barriers & Electrodes I	U6: Barriers & Electrodes II	U7: Posters (M)
V: Metallic Magnetic Oxides	Prov/Orleans (M)	V1: Materials Processing V2: Posters	V3: Invited Session		V4: Characterization I	V5: Characterization II V6: Posters	
W: Chemical Aspects of Electronic Ceramics Proc. <i>Sunday Tutorial Session**</i>	Salon C/D (M)	W1: New Directions in Chemical Processing of Electronic Ceramics	W2: MOCVD of Electronic Ceramics I—Oxides		W3: Deposition	W4: Superconductors W5: MOCVD of Electronic Ceramics II—Processing	W6: Posters (M)
X: Frontiers of Materials Research	Salon E (M)					X1	
Y: Matis. for Electrochemical Energy Stor. & Conversion II	America Center (W)	Y1: Lithium Ion Rechargeable Batteries—Genl & Modeling	Y2: Fuel Cells—1		Y3: Lithium Ion Rechargeable Batteries—Cathode Materials I	Y4: Fuel Cells—2	
Z: Recent Advances in Catalytic Materials	Hampton (S)				Z1: Oxide Catalysts I	Z2: Metal Catalysts	Z3: Posters (S)
AA: Covalently Bonded Disordered Thin-Film Matis.	St. George B/C/D (W)				AA1: Structural Models in Disordered Carbon	AA2: Characterization of Amorphous Carbon	
BB: Science & Tech. of Thermal Spray Matis. Processing	Essex N/Ctr (W)				BB1: Processing Science - A	BB2: Processing Science - B	
CC: Particulate Coatings—Synth., Charac. & Related Fundamental Phenomena	Essex East (W)	CC1: Partic. Ctigs. - Fund. Phen. CC2: Particulate Coatings - Synthesis & Processing	CC3: Nanostructured Materials	CC4: Posters (W)	CC5: Thick Films & Particle-Based Coatings CC6: Part. Adhesion & Cleaning		
DD: High-Pressure Materials Research	Staffordshire (W)	DD1: Earth Materials at High Pressure	DD2: Dynamic Compression	DD3: Posters (W)	DD4: New Techniques—Theory & Experiments	DD5: High-Pressure Synthesis & Superhard Materials	
EE: Electrically Based Microstructural Charac. II	Republic A (S)	EE1: Advances in Experiment. I Techniques	EE2: Semiconductors & Microelectronic Applications		EE3: Nonlinear Conduction & Device Degradation	EE4: Composites & Mechanical Degradation	EE5, EE6: Posters (S)

\* Check Poster Session Locator.

\*\* Check Tutorial Program Matrix

\*\*\* Shaded Blocks: No Session

WEDNESDAY, DECEMBER 3			THURSDAY, DECEMBER 4			FRIDAY, DECEMBER 5	
a.m.	p.m.	eve.*	a.m.	p.m.	eve.*	a.m.	p.m.
A7: Strain Effects on Alloy & Interface Stability	A8: Strain Effects on Interface Stability	A9, A10, A11: Posters (W)	A12: Metal Growth Atomistics	A13: Roughening During Crystal Growth & Etching			
B7: Beam-Induced Transformations	B8: Amorphous Solids		B9: Interfaces & Interfacial Reactions	B10: Nanophases & Mechanical Alloying	B11: Posters (W)	B12: Thin Film Transformations	
C1: Self-Organized Nanostructures I	C2: Self-Organized Nanostructures II		C3: Self-Organized Nanostruc. III	C4: Self-Organized Nanostruc. IV	C5: Posters (W)		
D11: Bulk Crystal Growth D12: Phase Separation in InGaN	D13: MBE D14: Theory	D15: Posters (M)	D16: HVPE D17: P-Type Doping & LEDs	D18: Characterization III D19: QWs & Heterojunctions		D20: Properties of GaN Lasers D21: Industrial Applications of GaN Lasers	
E5: Silicon Carbide Technology	E6: Dielectrics, Processing		E7: IGBTs and FETs	E8: Devices & Processing Issues			
F6/I10: Materials Growth & Doping of II-VI	F7/I11: Infrared Detectors II F8/I12: Infrared Detectors II (Cont'd)		F9: Interdiffusion in Quantum Well Materials & IR Applications	F10: Nonlinear Optical and OPO Materials			
G2: Si-Based Thin Films - A	G3: Si-Based Thin Films - B		G4: II-VI Based Thin Films - A	G5: II-VI Based Thin Films - B		G6: Thin Films - General	
H9: Quantum Wells & New Materials H10: Photonics Devices In & On Si	H11: New Matl. & Device Concepts H12: Posters—Por. Si-Based Mat. H13: Posters—New Matls. for Integ. & Interconn.						
I10/F6: Materials Growth & Doping of II-VI SALON J/K (M)	I11/F7: Infrared Detectors II SALON J/K (M) I12/F8: Infrared Detectors II (Cont'd) SALON J/K (M)		I13: Cadmium Telluride I14: Vapor Deposited Semiconductors for Detectors	I15: Lead Iodide I16: Other Semiconductor Detector Materials		I17: Group IV Semiconductors for Detectors I18: Radiation Damage	
J7: Nonlinear Optical/ Photorefractive Materials II	J8: Light-Emitting Polymers	J9: Posters (W)	J10: Molecular Engineering/Liquid Crystal Display	J11: Conjugated Polymers		J12: Nonlinear Optical/ Photorefractive Materials III	J13: Light-Emitting Matls
K6: Membranes & Vesicles	K7: Supported Bilayers K8: Cells		K9: Cell Adhesion, Motility, Transport	K10: Single Molecular Mechanics & DNA Manipulations			
L6: Dynamics in Complex Fluids I	L7: Dynamics in Complex Fluids II		L8: Polymer & DNA Complexes with Oppositely Charged Amphiphiles	L9: Microemulsions & Theory of Amphiphile Phases		L10: Neutral & Charged Polymers	L11: Mixed & Poly. Amph.
M6: Composite Fracture & Durability	M7: Composite Interface Adhesion		M8: Toughness, Characterization, Sensing	M9: Composite Properties vs Structure			
N6: Adhesion	N7: Polyelectrolytes & Biopolymers		N8: Phase Transitions in Confined Geometries I	N9: Phase Transitions in Confined Geometries II		N10: Adsorption	N11: Session 11
O	O1: Tissue Engineering O2: Resorbables & Implants		O3: Bone Grafts & Bone Cement O4: Drug Delivery	O5: Polyethylene O6: Posters			
P7: Magnetic Materials—Modeling & Development	P8: Semiconducting Materials—Modeling & Development		P9: Modeling Dislocations & Dislocation Dynamics				
Q4: Semiconductor Equipment Modeling	Q5: Semicond. Topog. Modeling Q6: Semicond. Charac. & Device Modeling						
R6: Tight-Binding Simulations I	R7: Tight-Binding Simulations II						
S6: Mechanical Properties of Interfaces	S7: Transport Properties & Phase Transitions		S8: Thin Films & Nanostructures	S9: Chemical Properties of Interfaces			
T6: Superconductivity in Japan, U.S., & Europe	T7: Conductor Applications & Materials	T8: Posters (M)	T9: Melt-Textured Materials	T10: Flux Pinning & AC Loss	T11: Posters (M)	T12: Bi Conductors	T13: Y & Other Conduct
U8: Bi-Layered Ferroelectrics	U9: Pb-Based Ferroelectrics	U10, U11: Posters (M)	U12: Microwave & Optical Devices	U13: Materials for Piezoelectric MEMS	U14, U15, U16 Posters (M)	U17: Ferroelectric Thin-Film Devices	
V7: Theory & Devices	V8: Devices & Multilayers		V9: Physical Properties I	V10: Physical Properties II V11: Posters			
W7: MOCVD of Electronic Ceramics III—Precursors W8: Silicon Dielectrics	W9: Novel Processing of Electronic Ceramics		W10: Processing of Silicon Carbide & Diamond	W11/I18: Intelligent Processing of Electronic Ceramics	W12: Panel Disc.—Future of Electronic Ceram. Proc.		
X	X2			X3			
Y5: Supercapacitors	Y6: Matls. for Other Battery Sys. Y7: Lithium Ion Rechargeable Batteries—Cathode Matls. II	Y8: Posters (W)	Y9: Battery Materials Characterization	Y10: Lithium Ion Rechargeable Battery—Anode Materials		Y11: Battery Electrolytes, Interfaces, & Passive Films	
Z4: Oxide Catalysts II Z5: Carbon-Based Catalysts	Z6: Pillared, Layered & Porous Catalysts		Z7: Sulfides & Carbides Z8: Zeolites & Related Materials	Z9: Acids & Bases Z10: Surface Modifications			
AA3: Amorphous Carbon Growth & Tribology	AA4: Boron & Carbon Nitrides I AA5: Posters—Bor. & Carb. Nit. II		AA6: Electron Emission I AA7: Posters—Electron Emiss. II	AA8: Electron Emission III AA9: Posters—Covalently Bonded Materials			
BB3: Emerging Technologies & Applications - A	BB4: Emerging Tech. & Applic. - B BB5: Science & Technology of Water-Stabilized Plasmas		BB6: Near-Net Fabrication BB7: Mechanical Properties - A	BB8: Mechanical Properties - B BB9: Microstructures & Imperfections			
CC							
DD6: Hydrogen at High Temperature	DD7: Semicond. & Supercond. at High Pressures		DD8: Dense Solids—Molecular & Metallic	DD9: Metastability, Amorphization & Glasses			
EE7: Dielectrics & Ferroelectrics	EE8: Ionic & Mixed Conducting Materials						

# MRS 1997 FALL MEETING SESSION LOCATOR

SYMPOSIUM	LOCATION	MONDAY, DECEMBER 1			TUESDAY, DECEMBER 2		
		a.m.	p.m.	eve.*	a.m.	p.m.	eve.*
FF: Surface-Controlled Nanoscale Materials for High-Added-Value Applic. <i>Sunday Tutorial Session**</i>	America North (W)	FF1: Electronic Nanomaterials	FF2: Electronic & Optical Nanomaterials		FF3: Magnetic Nanomaterials & Imaging	FF4: Nanocomposites & Coating	FF5: Posters (W)
GG: Functionally Graded Materials	Essex East (W)				GG1: Modeling <b>ADAMS (W)</b>	GG2: Processing I	
HH: Materials Applications of Electron Holography and Related Techniques	Berkeley (S)						
II: <i>In Situ</i> Process Diag. & Intelligent Matls. Processing	Cape Cod/Hyannis (M)				II1: Sensor Technologies for <i>In-Situ</i> Diagnostics	II2: Semiconductor Diagnostics II3: Posters— Semiconductor Diagnostics	
JJ: Nondestructive Charac. of Materials in Aging Systems <i>Sunday Tutorial Session**</i>	Fairfax B (S)	JJ1: Nondestructive Characterization of Materials in Aging Aerospace Structures	JJ2: Nondestructive Characterization of Aging Composite & Bonded Structures		JJ3/MM4: Nondestructive Characterization of Cement <b>INDEPENDENCE WEST (S)</b>	JJ4: Characterization of Radiation Damaged Materials	
KK: Atomistic Mechanisms in Beam Synthesis and Irradiation of Materials	Essex West (W)	KK1: Defects & Modeling	KK2: Material Flow, Ceramic Materials, & Cluster-Beam Deposition	KK3: Posters (W)	KK4: Energetic Particle Synthesis, Modeling & Mechanical Properties	KK5: Optical Materials, Nano-clusters, Ceramics, & Polymers	KK6: Posters (W)
LL: High-Thermal-Conductivity Materials—Fund. & Applic.	Boston College (M)	LL1: Thermal Conductivity Mechanisms & Measurement	LL2: Processing & Metallization		LL3: Composites—Processing & Properties		
MM: Advances in Materials for Cementitious Composites	Independence W (S)	MM1: Waste Treatment & Utilization	MM2: Comp./Reinforc. Concrete MM3: Posters		MM4/JJ3: Nondestructive Characterization of Cement	MM5: Processing & Hydration MM6: Novel Systems & Applic.	
NN: Thin Films—Stresses and Mechanical Properties VII	Essex South (W)	NN1: Novel Testing Methods	NN2: Low-Load Indentation		NN3: Modeling & Simulations I—Low-Load Indentation NN4: Metallization & Reliability	NN5: Structural & Mechanical Stability	NN6: Posters (W)
OO: Workshop on Materials Education	Regis/Boston Univ (M)				OO1: Innovations in Materials Curricula/Assessment	OO2: Computers in Materials Education	OO3: Demos—Software & Teaching Resources

\*Check Poster Session Locator.

\*\* Check Tutorial Program Matrix.

\*\*\* Shaded Blocks: No Session

## MRS 1997 FALL MEETING - EVENING POSTER SESSION LOCATOR

Monday, 12/1	Tuesday, 12/2	Wednesday, 12/3	Thursday, 12/4
<b>Boston Marriott</b>			
<b>Salons G-K</b>	<b>Salons E-G</b>	<b>Salons G-K</b>	<b>Salon G</b>
D5: Crystal Growth T3: HTS Films and Devices U3: BST/DRAM U4: Domains and Size Effects	D10: Characterization E4: Power Devices and Materials F5: Infrared Materials and Devices I9: Poster Session U7: Electrodes and Barriers W6: Solution & Vapor Processing of Electronic Ceramics	D15: Theory, Processing and Devices T8: YBCO and Other Materials U10: Bi-Layered Ferroelectrics U11: Pb-Based Ferroelectrics	T11: Bi Conductors and Processing U14: Microwave/Optical Devices U15: MEMS U16: Novel Ferroelectric Devices

## MRS 1997 FALL MEETING - EVENING POSTER SESSION LOCATOR

Monday, 12/1	Tuesday, 12/2	Wednesday, 12/3	Thursday, 12/4
<b>Westin Hotel • America Ballroom</b>			
A3: Phase Transformations, Silicides and the Formation of Amorphous Dielectrics J3: Poster Session CC4: Poster Session DD3: High Pressure KK3: Mechanisms in Irradiation and Beam Synthesis of Materials I	A6: Polycrystalline Films B6: Solid State Transformations and Solidification FF5: Poster Session KK6: Mechanisms in Irradiation and Beam Synthesis of Materials II NN6: Poster Session I	A9: Strained Epitaxial Films A10: Surface Dynamics; Crystal Growth and Etching A11: Metal and Oxide Films and Surfaces J9: Poster Session Y8: Poster Session NN10: Poster Session II	B11: Non-Equilibrium & Thin Film Transformations C5: Self-Organized Nanostructures

**1997 MRS FALL MEETING**  
Preregistration Deadline: **November 14, 1997**  
412-779-3003

WEDNESDAY, DECEMBER 3			THURSDAY, DECEMBER 4			FRIDAY, DECEMBER 5	
a.m.	p.m.	eve.*	a.m.	p.m.	eve.*	a.m.	p.m.
FF6: Functionalization & Biomaterials	FF7: Sintering & Future Trends in Nanostructured Materials						
GG3: Processing II GG4: Fracture & Deformation I	GG5: Fracture and Deformation II		GG6: Design for Performance	GG7: Thermal & Electrical Properties			
HH1: Electron Holography Techniques	HH2: Applications I—Electric & Magnetic Fields		HH3: Applications II—Materials Characterization	HH4: Related Techniques—X-Ray & Photoelectron Holography HH5: Posters			
II4: Sensors for Intelligent Processing	II5: Thin-Film Processes II6: Posters—Thin-Film Processes		II7: <i>In-Situ</i> Diagnostics of Oxide Film Processes	II8/II11: Intelligent Processing of Electronic Ceramics <b>SALON C/D (M)</b>		II9: <i>In Situ</i> Diag. of Oxide Film Growth	
JJ5: Nondestructive Charac. of Infrastructure Materials	JJ6: New Aging Materials Characterization Techniques I		JJ7: New Aging Materials Characterization Techniques II				
KK							
LL							
MM7: Characterization							
NN7: Tribological Properties	NN8: Thin Film Adhesion NN9: Deformation & Fracture Mechanisms	NN10: Posters (W)	NN11: Stresses in Thin Films I—Generation Mechanisms NN12: Stresses in Thin Films II—Measurement Techniques	NN13: Modeling & Simulations II NN14: Artificially Multilayered & Superlattice Thin Films		NN15: Processing-Microstructure-Mechanical Property Relationships	
OO4: Innovative Courses & Programs I	OO5: Innovative Courses & Programs II/Assessment						

**MRS 1997 FALL MEETING  
EVENING POSTER SESSION LOCATOR**

**Tuesday, 12/2**

**Sheraton Boston • Grand Ballroom**

K5: Poster Session  
L5: Poster Session  
M5: Poster Session  
N5: Poster Session  
Q3: Poster Session  
R5: Semi-Empirical Tight-Binding—Part III  
S5: Interfaces in Solids and Liquids  
Z3: Catalytic Materials  
EE5: Microelectronic Applications  
EE6: Corrosion of Metals and Polymer/Metal Interface

**1997 MRS FALL MEETING**

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program\\_book/location.html](http://www.mrs.org/meetings/fall97/program_book/location.html)

**Deadline: November 1, 1997**

**Sunday • November 30**

**Symposium I**  
1:00 - 5:00 p.m.  
FTI: Imaging with Room-Temperature Semiconductor Detectors  
Salon H/I (M)

**Symposium U**  
8:00 a.m. - 5:00 p.m.  
FTU: Ferroelectric Thin Films  
Salon A/B (M)

**Symposium W**  
1:00 - 5:00 p.m.  
FTW: Chemical Processing and Applications of Electronic Ceramics—Chemical Vapor Deposition and Sol-Gel Processing  
Salon C/D (M)

**Symposium FF**  
2:00 - 5:00 p.m.  
FTF: Surface-Control of Nanoscale Materials through Clean Synthesis, Functionalization and Characterization  
America North (W)

**Symposium JJ**  
1:00 - 5:00 p.m.  
FTJ: Nondestructive Materials Evaluation—An Overview Addressing Its Theory and Application  
Fairfax B (S)

**Tuesday • December 2**

**Symposium G**  
1:30 - 5:00 p.m.  
FTG: Fundamentals of Solar Cells—Design and Material Issues  
Suffolk Room (M)

**Symposium Tutorial Program**



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 FF  GG  HH  II  JJ  KK  LL  MM  NN  OO

**B Tutorial Notes**  
Tutorial attendance is open to all meeting registrants at no extra charge.  
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 FTI: Imaging with Room-Temperature Semiconductor Detectors .....\$25  
 FTU: Ferroelectric Thin Films .....\$25  
 FTW: Chemical Processing and Applications of Electronic Ceramics—Chemical Vapor Deposition and Sol-Gel Processing .....\$25  
 FTf: Surface Control of Nanoscale Materials through Clean Synthesis, Functionalization and Characterization.....\$25  
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