

MS&T'07 PRELIMINARY PROGRAM  
Award Lectures/Sessions



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## AWARD LECTURES/ SESSIONS

Sunday, September 16, 2007

### ***ACerS Frontiers of Science and Society - Rustum Roy Lecture***

5:00 PM-6:00 PM

Room: M3-32

COBO Center, Macomb Zone, Level 3

Session Chair: Gary Messing

### **The New Century: High Frontier or Tragic Descent for Mankind? (Invited)**

John H. Gibbons\*, Resource Strategies, USA

Monday, September 17, 2007

### ***ASM/TMS Distinguished Lecture***

1:00 PM-2:00 PM

Room: O2-44

COBO Center, Oakland Zone, Level 2

### **Overview Lectureship in Materials and Society**

Alan Taub, General Motors Corporation,  
USA

### ***ASM/TMS Distinguished Lecture Session***

2:00 PM-4:45 PM

Room: O2-44

COBO Center, Oakland Zone, Level 2

**2:00 PM**

### **Well-to-Wheels Analysis of Advanced Vehicle Technologies and Transportation Fuels (Invited)**

Michael Wang\*, Argonne National  
Laboratory, USA

**2:30 PM**

### **Material Selection for Lighter-Weight Vehicles (Invited)**

John Fillion\*, DaimlerChrysler, USA

**3:00 PM**

Break

**3:15 PM**

### **Advanced Batteries for Vehicle Electrification (Invited)**

Yet-Ming Chiang\*, Massachusetts Institute  
of Technology, USA

**3:45 PM**

### **Vehicle Electrification Fuel Cell Propulsion Progress and Challenges (Invited)**

Jonas (Jon) Bereisa\*, General Motors  
Corporation, USA

**4:15 PM**

Panel Discussion

### ***Alpha Sigma Mu Lecture***

3:00 PM-4:00 PM

Room: M2-30

COBO Center, Macomb Zone, Level 2

### **Nanomechanics of Biological Cells and Human Disease States (Invited)**

Subra Suresh\*, Massachusetts Institute of  
Technology, USA

### ***ACerS Cements Division Della Roy Lecture***

3:50 PM-4:50 PM

Room: O2-36

COBO Center, Oakland Zone, Level 2

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Session Chair(s): Joseph Biernacki

Next Horizon in Advanced Cement-Based  
Materials (Invited)  
Surendra P. Shah<sup>\*</sup>, Northwestern University,  
USA

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Tuesday, September 18, 2007

***Richard M. Fulrath Award  
Session***

8:30 AM-11:20 AM

Room: D0-06AB

COBO Center, Detroit Zone, Level 0

Session Chair(s): David Marshall

***8:30 AM***

Introductory Remarks

***8:40 AM***

**Mesoscopic Complex-Structure Control  
for Property Enhancement in Perovskite  
Ferroelectrics (Invited)**

Satoshi Wada\*, University of Yamanashi,  
Japan

***9:20 AM***

**Novel CO<sub>2</sub> Absorbents using Lithium-  
Containing Oxide (Invited)**

Masahiro Kato\*, Toshiba Corporation, Japan

***9:40 AM***

**Silicon Carbide Composites for Nuclear  
Applications (Invited)**

Lance Snead\*, Y. Katoh, T. Nozawa, Oak  
Ridge National Lab, USA; A. Kohyama, T.  
Hinoki, Kyoto University, Japan; R. Lowden,  
S. J Zinkle, Oak Ridge National Lab, USA;  
T. Taguchi, Japan Atomic Energy Research  
Institute, Japan

***10:00 AM***

Break

***10:20 AM***

**Materials and Lattice Vibration (Invited)**

Takeshi Shimada\*, Advanced Electronics  
Research Laboratory, Japan

***10:40 AM***

**Novel Concepts in 1-D, 2-D, and 3-D  
Functional and Structural Nanoceramics:  
Nanowires, Nanotubes, Thin Films, and  
Nanocomposites (Invited)**

Nitin P. Padture\*, The Ohio State University,  
USA

***TMS Young Leaders Tutorial  
Luncheon & Lecture***

12:00 PM-2:00 PM

Room: O2-44

COBO Center, Oakland Zone, Level 2

***12:00 PM***

Lunch

***1:00 PM***

**Design of New Materials to Address  
Critical Needs (Invited)**

James Economy\*, University of Illinois at  
Urbana-Champaign, USA

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***Edward DeMille Campbell***

***Memorial Lectureship***

12:45 PM-1:45 PM

Room: O3-46

COBO Center, Oakland Zone, Level 3

**Designing Functional Materials (Invited)**

Subhash Mahajan\*, Arizona State University,  
USA

***ACerS Edward Orton Jr.***

***Memorial Lecture***

1:00 PM-2:00 PM

Room: M2-30

COBO Center, Macomb Zone, Level 2

**Micro-Ionics: A Revolution in Portable  
Power Generation and Environmental  
Sensing (Invited)**

Harry L Tuller\*, Massachusetts Institute of  
Technology, USA

***ACerS Robert B. Sosman Award  
and Lecture***

1:00 PM-2:00 PM

Room: D2-15

COBO Center, Detroit Zone, Level 2

**Electrical Ceramics: Microstructures,  
Thin Layers and Single Crystals (Invited)**

David Alan Payne\*, University of Illinois at  
Urbana-Champaign, USA

***National Funding Workshop***

4:30 PM-6:00 PM

Room: M3-32

COBO Center, Malcomb Zone, Level 3

***4:30 PM***

**National Science Foundation**

***5:15 PM***

**Office of Basic Energy Sciences**

Wednesday, September 19, 2007

***ACerS Arthur L. Friedberg***

***Memorial Lecture***

10:30 AM-11:30 AM

Room: M2-30

COBO Center, Macomb Zone, Level 2

Session Chair: James McCauley

**Materials Science and Engineering: A  
Rewarding Career (Invited)**

David Richerson\*, University of Utah, USA