



MALCOLM G. McLAREN CENTER FOR CERAMIC RESEARCH

607 Taylor Road • Busch Campus • Piscataway • New Jersey 08854-8065
Telephone: 732/ 445-5900 • FAX: 732/ 445-1668

AGENDA

Semiannual Review Meeting Ceramic & Composite Materials Center An NSF Multi-University I/UCRC The University of New Mexico and Rutgers University

WEDNESDAY, OCTOBER 10, 2001

8:00 Registration - Continental Breakfast - Fiber Optics Lobby

8:20 Welcome and Overview, *D. E. Niesz*

8:30

POWDER PROCESSING

- Particle Orientation in Green Microstructures, R. Haber
- Compaction Behavior of Spray-Dried Powders, S. Balasubramanian
- Determination and Control of Water Content in Chemically Synthesized Dielectric Powder, R. Riman
- Overview of Powder Processing Projects Not Presented, D. Niesz

9:30

Coffee Break

10:00

VAPOR PHASE PROCESSING

- Incorporation of Gold Colloids into Mesoporous Oxide Powders, A. Datye
- New Center Project (G. Lopez), A. Datye
- Aerosol Synthesis of Complex Oxide Powders, T. Ward
- Plasma Torch Production of Novel Materials, J. Phillips

10:55

SOL GEL SCIENCE AND TECHNOLOGY

- Patterning Strategies for Mesoporous and Mesophase Film Formation, C. J. Brinker
- Unraveling Evaporation Induced Self-Assembly, C. J. Brinker
- Self-Assembled Nanoporous Silica Films for Microelectronics Integration, C. J. Brinker
- Immobilization of Biological Materials in a Porous Silica Host Matrix, C. J. Brinker
- Hybrid Nanocomposites with Opto-Electronic Functions and Strong Mechanical Properties, C. J. Brinker

12:00 Student Poster Presentations

12:30 Lunch

1:30

STRUCTURAL CERAMICS

- Simulations of the Molecular Mechanisms Occurring in Chemical-Mechanical Polishing, S. Garofalini
- Chemical Mechanical Polishing of Sapphire, D. Niesz
- Macroscopically Graded Ceramic/Metal Armor Composites, S. Danforth
- Effects of Gas Phase Composition in Pores During Densification, M. J. Matthewson

2:30

ELECTRONIC CERAMICS AND COMPOSITES

- Powder Synthesis (R. T. Paine), W. Kroenke
- High Solids Loading in Polymers, D. Shanefield
- Atomic Layer Deposition of Fine Particles – Surface Chemistry (S. George), W. Kroenke
- Atomic Layer Deposition of Fine Particles – Engineering (A. Weimer), W. Kroenke
- Conformal Plasma Coating of Particles for Polymer Composites (D. Weinkauf), W. Kroenke
- Modeling Co-sintering of Multilayer, Multifunctional Ceramic Packages (M. J. Matthewson) W. Kroenke
- Non-Platinum Electrocatalysts for Fuel Cells (P. Atanassov), W. Kroenke
- Amorphous Electroactive Materials, J. Xu
- Glass/Metal Interfaces under the Influence of an Electric Field, M. Alvarez

4:00 **POSTER SESSION** CCR Lobby

6:00 **Reception, Four-Points Sheraton**

7:00 **Buffet Dinner, Four-Points Sheraton**

THURSDAY, OCTOBER 11, 2001

8:30 **Continental Breakfast, Four Points Sheraton**

9:00 **CCMC Industrial Advisory Board Meeting, Four Points Sheraton**

12:00 **Adjourn**

