



**Ceramic, Composite and
Optical Materials Center**
an NSF, I/UCRC
Clemson University, South Carolina
Rutgers, The State University of New Jersey

Fall 2010 Industrial Advisory Board Meeting

8-10 November, 2010

Clemson University

Monday, 8 November, The Conference Center & Inn, Harris Terrace

7:00-9:00pm Welcome reception and registration

Tuesday, 9 November, The Conference Center & Inn, Bell South Auditorium

8:00-8:30 **Registration & Continental Breakfast**

8:30-8:45 Welcome, Phil Brown

8:45-9:15 Introductory Remarks, NSF

TECHNICAL REVIEW - Clemson Site

9:15-9:35 Review of Meeting Objectives and New CCOMC, Rich Haber

9:35-9:55 Review of The Center for Optical Material Science and Engineering:
From Grass Roots to Economic Impact, Phil Brown

9:55-10:15 **A** - Hydrothermal Synthesis and Processing of Refractory Oxides and
Nitrides, Joe Kolis

- 10:15-10:35 **B** - Transparent Ceramics with Enhanced Mechanical Properties, John Ballato
- 10:35-10:55 **C** - Optically active polymeric fiber based materials via bicomponent melt extrusion, Phil Brown
- 10:55-11:25 **Break**
- 11:25-11:45 **D** - Evanescent wave sensors grafted with enrichment polymer layers, Igor Luzinov and Kathleen Richardson
- 11:45-12:05 **E** - Optical Fluoropolymers: Synthesis, Applications and Commercialization, Dennis W Smith
- 12:05-1:30 **Lunch, Bell South Auditorium**
- 1:30 - 3:00 Rutgers Site Review
- F (a)** - Performance improvement of flexible Dye Sensitized Solar Cells using templated TiO₂ coatings deposited by commercial techniques, Dunbar Birnie
- (b)** - Low-Temperature Reactive Sintering for Printed Solar Cells, Dunbar Birnie
- G (a)** - Transparent Spinel - Rich Haber
- (b)** - Processing of Boron Carbide, Rich Haber, Steve Miller
- H** - Chemical Uniformity in Ceramic Powder Processing, Rik Riman
- I** - Modeling the Densification of Non-Oxide Ceramics, John Matthewson, Rich Haber
- J** - Effect of Machining on Residual Stressing in Ceramics, Adrian Mann, Rich Haber
- 3:00-3:30 **Break**
- Rutgers Site Review continued ...
- 3:30-4:30 **K** - Defining Microstructural Tolerance Limits of Defects for SiC and Al₂O₃ Armor, Rich Haber, Dale Niesz
- L** - B₄C Variability, Dan Maiorano, Rich Haber

- M - Variability in SiC Powders, Rich Haber
- N - Theoretical Calculations in SiC, Christin Morrow, Rich Haber
- O - NDE of Armor, Rich Haber

4:30-5:30 **Poster Session and Reception - Ballroom B**

5:30-8:30 **Buffet**

Wednesday, 10 November, AMRL Building, 91 Technology Dr, Anderson

Two functions will be held on Thursday Morning. For the Industrial Advisory Board Members, the IAB Meeting will be held. For other corporate members a set of tours/demonstrations are scheduled. All will be completed by noon to allow for travel

INDUSTRIAL ADVISORY BUSINESS MEETING — AMRL Building

- 7:30 Continental Breakfast
- 8:00-8:30 Site Reviews
- 8:30-9:30 NSF Evaluator Review, Steve McGregor
- 9:30-10:00 Technical Session and Strategic Planning, IAB Closed Session
- 10:00-12:00 Tours at COMSET/AMRL
 - Electron Microscope Facility
 - Fiber Optic Draw Tower
 - Thermal Characterization Laboratory
 - Research Laboratory
- 12:15 **Box Lunch, AMRL Building**