

# Complex Fluids Design Consortium Annual Meeting

Monday, February 4, 2013

Materials Research Laboratory, Room 2053  
University of California, Santa Barbara

- 9:00-9:30 am      *CFDC: Welcome and Update*  
Prof. Glenn Fredrickson, Director CFDC, Chemical Engineering and  
Materials, UCSB
- 9:30-9:45 am      *CFDC Simulation Code Update*  
Dr. Kris Delaney, MRL, UCSB
- 9:45-10:15 am     *The Hole Shrink Problem: Directed Self-Assembly in Cylindrical  
Confinement Using Self-Consistent Field Theory*  
Dr. Nabil Laachi, MRL, UCSB
- 10:15-10:45 am    Coffee Break
- 10:45-11:15 am    *Shear Banding in Polymer Solutions: A Consequence of Stress-  
Concentration Coupling*  
Dr. Mike Cromer, Chemical Engineering, UCSB
- 11:15-11:45 am    *Coherent States Formulation of Polymer Field Theory*  
Dr. Xingkun Man, MRL, UCSB
- 11:45- 12:00 pm    *Field Theory Simulation of Block Copolymer in Selective Solvent*  
Dr. Wei Li, MRL, UCSB
- 12:00-1:00 pm     Lunch on MRL 3<sup>rd</sup> Floor Patio
- 1:00-1:30 pm      *Complex Langevin Simulations of Fluctuation-Induced Co-continuous  
Emulsion Phases in Block Polymer Melts*  
Dr. Kris Delaney, MRL, UCSB
- 1:30-2:00 pm      *Functional Polyethers as a Versatile Biomedical Materials Platform*  
Dr. Nate Lynd, MRL, UCSB
- 2:00-2:30 pm      *Phase Coexistence Calculations via a Unit-Cell Gibbs Ensemble  
Formalism for Melts of Reversibly Bonded Block Copolymers*  
Zoltan Mester, MRL and Chemical Engineering, UCSB

- 2:30-2:45 pm *Nucleation of Ordered Phases in the Landau-Brazovskii Model*  
Michael Carilli, MRL and Physics, UCSB
- 2:45-3:00 pm *Self-Consistent Field Theory for Directed Self-Assembly in Non-Cylindrical Confinement*  
Tatsuhiko Iwama, Asahi Kasei and MRL, UCSB
- 3:00-3:30 pm Coffee Break
- 3:30-4:00 pm *Field-Based Simulations of Nanostructured Coacervate Gels*  
Debra Audus, MRL and Chemical Engineering, UCSB
- 4:00-4:30 pm *Solvent-Casting Block Copolymer Thin Films: Morphology Selection at the Ordering Front*  
Sean Paradiso, MRL and Chemical Engineering, UCSB
- 4:30-5:00 pm *Defectivity Study of Directed Self-Assembly of Cylindrical Diblock Copolymers in Laterally Confined Thin Channels*  
Dr. Bongkeun Kim, MRL, UCSB
- 5:00-5:15 pm *Structure-Property Relationships in Hydrogels from Polyelectrolytes*  
Jeffrey Gopez, MRL & Chemical Engineering, UCSB
- 5:15-5:30 pm *Anti-Fouling of Filtration Membranes Using Polymer Brushes*  
Edward Toumayan, MRL & Chemical Engineering, UCSB
- 5:30-5:45 pm *Understanding and Controlling Energy Transport in Donor-Trap Systems via Kinetic Monte-Carlo Simulations*  
Nancy Eisenmenger, MRL & Materials, UCSB
- 5:45-6:00 pm *Maximizing Phase Segregation in Silicon-Containing Block Copolymers*  
Dr. Damien Montarnal, MRL, UCSB
- 6:00 pm Adjourn CFDC meeting
- 6:00-6:30 pm CFDC Steering Committee Meeting  
Steering Committee Members Only, MRL 3117D
- 7:00pm CFDC Dinner, Flavor of India