

**Fields Interacting with Soft Matter**  
*Institute for Multiscale Materials Studies Workshop*  
*Research Park, Room 203*

*Monday September 8: Structure-Electronic interplay in soft matter systems*

- 8:00 AM**      *Conference Registration*
- 8:15 AM**      *Ed Kober (LANL/IMMS)*      *Welcome—Institute overview*
- 8:30 AM**      *Michael Chabinyc (UCSB)*      Flexible Electronics with Printable Semiconducting Polymers
- 9:10 AM**      *Sergei Tretiak (LANL/CINT)*      Multiscale Modeling of Electronic Excitations at the Nanoscale
- 9:50 AM**      **COFFEE BREAK--- INFORMAL DISCUSSIONS**
- 10:15 AM**      *Thuc-Quyen Nguyen (UCSB)*      Nanostructures in Organic Semiconductors and the Energy Challenge
- 10:55 AM**      *Darryl Smith (LANL)*      Comparison of Spin Injection and Transport in Organic and Inorganic Semiconductors
- 11:35 AM**      *Han Htoon (LANL/CINT)*      Anomalous Circular Polarization of Magneto-Photoluminescence from Individual CdSe
- 12:15 PM**      **LUNCH**

**Bio-sensors and other bio applications**

- 1:00 PM**      *Basil Swanson (LANL)*      Biomimetic Approaches to Pathogen Detection and Medical Diagnostics
- 1:40 PM**      *Bruce Bunker (SNL/CINT)*      Programmable Monolayers for On-Chip Sensing and Separations
- 2:20 PM**      **COFFEE BREAK--- INFORMAL DISCUSSIONS**
- 2:45 PM**      *James Werner (LANL/CINT)*      Tracking Single Quantum Dots in 3D: Applications in Biology and Soft Materials
- 3:25 PM**      *Scott Shell (UCSB)*      Folding Proteins and Peptides with All Atom Physics: Methods and Applications
- 4:05 PM**      *Jennifer Martinez (LANL/CINT)*      Synthesis and Assembly of Nanoarchitectures: Fluorescent Nanoclusters

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Tuesday September 9: **Structure of soft matter assemblies**

- 8:00 AM**     *Mark McClesky (LANL)*     MaRIE overview
- 8:30 AM**     *Craig Hawker (UCSB)*     Design and Synthesis of Performance Materials for Semiconductor and Biomedical Applications
- 9:10 AM**     *Jaroslav Majewski (LANL)*     Model Biomembranes and Their Interactions with Polymeric Structure
- 9:50 AM**     **COFFEE BREAK--- INFORMAL DISCUSSIONS**
- 10:15 AM**     *Paul Welch (LANL)*     Novel Properties of Regularly Branched Polymers
- 10:55 AM**     *Jon Schoonover (LANL)*     Dynamic Infrared Linear Dichroism and the Relation to Thermomechanical Properties
- 11:35 AM**     *Amalie Frischknecht (SNL/CINT)*     Phase Behavior of Polymer/Nanoparticle Blends near a Substrate
- 12:15 PM**     **LUNCH**
- 1:00 PM**     *Andrew Dattelbaum (LANL/CINT)*     Nanocomposite Silica Materials at the Interface of Chemistry and Biology
- 1:40 PM**     *Ed Kramer (UCSB)*     Self-assembly, and characterization of, soft matter structures in two dimensions
- 2:20 PM**     **COFFEE BREAK--- INFORMAL DISCUSSIONS**
- 2:45 PM**     *Rex Hjelm (LANL)*     Neutron Scattering from Soft Matter
- 3:25 PM**     *Mark Stevens (SNL/CINT)*     Using Coarse-grained Models to Simulate Soft Matter
- 4:05 PM**     *Panagiotis Maniadis (LANL)*     Phase Behavior of Polymeric Systems

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*Wednesday September 10:*    **Complex fluids**

- 8:20 AM**    *Marc Cawkwell (LANL)*    Deformation in Organic Molecular Crystals
- 9:00 AM**    *Barons Peters (UCSB)*    Accurate Reaction Coordinates and Free Energy Landscapes from Path Sampling
- 9:40 AM**    *Marilyn Hawley (LANL)*    AFM Characterization of Polymers
- 10:20 AM**    **COFFEE BREAK--- INFORMAL DISCUSSIONS**
- 10:50 AM**    *Nelson Bell (SNL/CINT)*    Interfacial Control in Photochromic Systems
- 11:30 AM**    *Todd Squires (UCSB)*    Fluid Mechanics and Microfluidics
- 12:10 PM**    **LUNCH**
- 1:00PM**    **Poster Session**
1. *Roger Diebold (UCSB)* ""
  2. *Arthur Scholz (UCSB)* ""
  3. *Jerred Chute (UCSB)* ""
  4. *Miguel Zapata (UCSB)* ""
  5. *Chris Hammetter (UCSB)* ""
  6. *Corey Hoven (UCSB)* ""
  7. *Leslie Sasa (Lujan)* ""
  8. *Eric Yearley (Lujan)* ""
- 3:00 PM**    **Adjourn**