Complex Fluids Design Consortium Annual Meeting

Friday, January 31, 2025

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

All Meeting Times are US Pacific Time (California)

Morning Session

9:00-9:20 am	*CFDC: Welcome and Update* Professor Glenn Fredrickson, Director CFDC, Chemical Engineering and Materials, UCSB
9:20-9:50 am	*Molecular Kuhn-scale Model for Linear Viscoelastic Properties of Entangled Polymer Networks* Professor Andrei Gusev, Department of Materials, ETH Zurich
9:50-10:10 am	*Modeling and Informing the Synthesis of Hyperbranched Polymers Using Coherent-States Field Theory* Charles Li, Chemical Engineering and MRL, UCSB
10:10-10:20 am	**Break**
10:20-10:40 am	*Molecularly-Informed Field Theories for Predicting Surfactant Phase Diagrams* David Zhao, Chemical Engineering and MRL, UCSB
10:40-11:00 am	*Stability of Frank-Kasper Phases in AB_n Miktoarm Star Polymers with Dispersity in n: Simulations and Experiments* Dr. Duyu Chen, MRL, UCSB
11:00-11:20 am	*Mechanisms of Li Ion Transport in Zwitterionic Electrolytes from Molecular Dynamics Simulation* Mizuki Kamata, Chemical Engineering and MRL, UCSB
11:20-11:40 am	*Thermodynamics of Reversible Bonding Polymers* Dr. Chris Balzer, MRL, UCSB
11:40-1:00 pm	**Lunch, MRL 3rd Floor Patio**

Afternoon Session

1:00-1:20 pm	*From Polymers to Magnets: Field-Theoretic Simulations for Studying Magnetic Materials* Ethan McGarrigle, Chemical Engineering and MRL, UCSB
1:20-1:40 pm	*Mesogen Alignment in Liquid Crystal Elastomers Under Mechanical Stress: From Bulk to Confinement* Dr. Elise Chen, MRL, UCSB
1:40-2:00 pm	*Investigating Hydrogen Bonding in Diblock Copolymer/Homopolymer Blends Using Coherent-States Field Theory* Dan Sun, Chemistry and MRL, UCSB
2:00-2:20pm	*Bottom-Up Coarse-Grained Modeling of Sequence-Specific Polymers* Daniela Rivera Mirabal, Chemical Engineering, UCSB
2:20-2:30 pm	**Break**
2:30-2:50 pm	*Accelerating the Inverse Design of Bulk Morphologies in the $A(BA')_3$ Miktoarm System* Will Sheppard, Mathematics, UCSB
2:50-3:10 pm	*Non Linear Eigenvalue Problems in Many-Body Physics and their Applications to Chemical Interfaces* Annabelle Canestraight, Chemical Engineering, UCSB
3:10-3:30 pm	*Data Efficient Methods for Determining Flory-Huggins χ Parameters in Multi-component Polymer Formulations* Dr. Tim Quah, Chemical Engineering and MRL, UCSB
3:30 pm	Wrap-up, adjourn CFDC Meeting

CFDC Dinner – 6:00 pm, Flavor of India