Complex Fluids Design Consortium Annual Meeting

Friday, January 27, 2023

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	*CFDC software update* Dr. Kris Delaney, MRL, UCSB
9:50-10:20 am	*Insights into Hydrated Ion-Conducting Polymers from Molecular Dynamics Simulations* Dr. Amalie Frischknecht, Sandia National Laboratories
10-20-10:30 am	**Break**
10:30-10:50 am	*Field-Theoretic Study of Elastin-Like Peptides* Dr. Kevin Shen, MRL and CNSI, UCSB
10:50-11:10 am	*Molecularly informed field theoretic models of surfactants* My Nguyen, Chemical Engineering and MRL, UCSB
11:10-11:30 am	*Multiscale modeling of viscosity index improver polymers* Charles Li, Chemical Engineering and MRL, UCSB
11:30-11:50 am	*Multiscale modeling of nonionic surfactant phase behavior* David Zhao, Chemical Engineering and MRL, UCSB
11:50-1:00 pm	**Lunch, MRL 3rd Floor Patio**

Afternoon Session

1:00-1:20 pm	*Machine Learning and SCFT to accelerate polymer phase discovery and inverse design* Professor Hector Ceniceros, Mathematics, UCSB
1:20-1:40 pm	*Complex Langevin methods for simulating interacting Bose heat cycles* Kimberlee Keithley, Chemical Engineering and MRL, UCSB
1:40-2:00 pm	*Investigating the Interplay of Quantum Statistics and Spin-orbit Coupling: Emergent Superfluid Mesophases* Ethan McGarrigle, Chemical Engineering and MRL, UCSB
2:00-2:20 pm	*Self-Assembly of Supramolecular Miktoarm Star Copolymer-Homopolymer Binary Blends* Dan Sun, Chemistry and MRL, UCSB
2:20-2:40 pm	*Investigating microstructure evolution in block copolymer membranes with dynamic self-consistent field theory* Anthony Cooper, Physics and MRL, UCSB
2:40-2:50 pm	**Break**
2:50-3:10 pm	*Quantitative Comparisons of Fluctuating Field-Theoretic Simulations* Tim Quah, Chemical Engineering and MRL, UCSB
3:10-3:30 pm	*Molecular Dynamics Simulations of Structure and Ion Transport in Poly-Zwitterionic Systems* Mizuki Kamata, Chemical Engineering and MRL, UCSB
3:30-3:50 pm	*Formation of bridge-rich and loop-less hydrogel of multi-block polyelectrolytes through suppressing micellization* Dr. Saeed Najafi, Chemistry & Biochemistry, UCSB
3:50-4:10 pm	*Investigation of the Self-Assembly Behavior of Statistical Bottlebrush Copolymers via Self-Consistent Field Theory Simulations* Dr. Duyu Chen, MRL, UCSB
4:10-4:15 pm	Wrap-up, adjourn CFDC Meeting

CFDC Dinner – 6:00 pm, Flavor of India