

Complex Fluids Design Consortium Annual Meeting

Friday, January 30, 2026

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

All Meeting Times are US Pacific Time (California)

Morning Session

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| 9:00-9:20 am | <i>CFDC: Welcome and Update</i>
Professor Glenn Fredrickson, Director CFDC, Chemical Engineering and Materials, UCSB |
| 9:20-9:40 am | <i>Molecular Weight Ratio Effects on Polymeric Microemulsion Phase Behavior</i>
Dr. Niklas Blagojevic, MRL, UCSB |
| 9:40-10:00 am | <i>Local Hydration Properties of Zwitterionic Functional Groups from Molecular Dynamics Simulations</i>
Mizuki Kamata, Chemical Engineering and MRL, UCSB |
| 10:00-10:15 am | Break |
| 10:15-10:35 am | <i>Multiscale Modeling of Surfactant Ternary Phase Behavior via Molecularly Informed Field Theory</i>
David Zhao, Chemical Engineering and MRL, UCSB |
| 10:35-10:55 am | <i>Topology of Equilibrium Polymerization</i>
Bohan Chu, Materials and MRL, UCSB |
| 10:55-11:15 am | <i>Towards Affordable Simulation of Pump–Probe Spectroscopy in Realistic Systems with Non-Equilibrium Green’s Functions</i>
Annabelle Canestraight, Chemical Engineering and Chemistry, UCSB |
| 11:15-11:35 am | <i>Novel Structures at the Sphere/Cylinder Transition in $A(BA')_m$ Copolymer Melts</i>
Will Sheppard, Mathematics, UCSB |

11:35-1:00 pm **Lunch, MRL 3rd Floor Patio**

Afternoon Session

- 1:00-1:30 pm *Interfacial Properties of Supramolecular Polymer Compatibilizers*
Dr. Chris Balzer, MRL, UCSB
- 1:30-1:50 pm *Predicting Sequence-Dependent Polymer Properties via Multiscale Simulations*
Daniela Rivera Mirabal, Chemical Engineering, UCSB
- 1:50-2:10 pm *Predicting Peptoid Formulation Phase Behavior Using a Molecularly Informed Field Theory*
Michael Meng, Chemical Engineering, UCSB
- 2:10-2:30 pm *Computational Studies for Designing Tough and Selective Tetrablock Copolymer Membranes*
Dr. Elise Chen, MRL, UCSB
- 2:30-2:50 pm *Coherent-State Field Theory for Annihilation Reactions*
Dr. Yao Xiong, MRL, UCSB
- 2:50-3:10 pm *PolyFTS and Predici in Practical Industrial Applications and Future Prospects in an AI Agentic World*
Dr. John Kraft, U. Houston and Kraton Corporation
- 3:10-3:15 pm Wrap-up, adjourn CFDC Meeting

CFDC Dinner – 6:00 pm, Flavor of India