



Spring 2022 Polymer Event

University of Massachusetts Amherst

Tuesday, May 24, 2022

Center for UMass-Industry Research on Polymers Cluster Sessions



TIME:

SESSION:

1:00 pm – 5:00 pm

Cluster A - Adhesion at Living Interfaces
(Member Company by Appointment)

1:00 pm – 5:00 pm

Cluster B - Polymers in Drug Delivery and the BioArena
(Member Company by Appointment)

1:00 pm – 5:00 pm

Cluster E - Polymers in Renewable Energy
(Member Company by Appointment)

1:00 pm – 5:00 pm

Cluster M - Mechanics & Advanced Manufacturing of Polymers and Composites
(Member Company by Appointment)

3:15 pm – 5:15 pm

Cluster F - Fire-Safe Polymers & Composites in Conte Room A624
(Closed Member Meeting Session)



Spring 2022 Polymer Event

University of Massachusetts Amherst

Wednesday, May 25, 2022

Advances in Polymer Science and Engineering



POLYMER SCIENCE AND ENGINEERING
UNIVERSITY OF MASSACHUSETTS AMHERST

TIME:	SESSION:
8:30 am – 9:00 am	Arrival and Check-In
9:00 am – 9:30 am	<i>Engineering Complex Anisotropic Foams for Advanced Deformational Response and Physical Properties</i> Professor Alan Lesser, Polymer Science & Engineering
9:30am - 10:00 am	<i>Colloidal Interactions at Biological and Fluid Interfaces</i> Professor Peter Beltramo, Chemical Engineering
10:00 am - 10:30 am	<i>Bio-Inspired Soft Networks</i> Professor Greg Tew, Polymer Science & Engineering
10:30 am – 10:40 am	Break
10:40 am – 11:00 am	<i>Aspects of the Melt Explosion and Sintering Behavior of UHMWPE</i> Ying Zhou, Lesser Research Group
11:00 am – 11:20 am	<i>Macromolecular Ligands for Synthesis and Anion Exchange of Perovskite Nanocrystals</i> Chris Cueto, Emrick Research Group
11:20 am – 11:40 am	<i>Investigating Time-Dependent Active Motion of Janus Micromotors Using Dynamic Light Scattering</i> Alex McGlasson, Bradley Research Group
11:40 am – 12:10 pm	<i>Conformational Entropy: New Paradigms in Polymer Crystallization and Polymer Dynamics</i> Professor Murugappan Muthukumar, Polymer Science & Engineering
12:10 pm - 1:30 pm	Lunch in the Conte Atrium
1:30 pm - 2:00 pm	<i>Hybrid Materials for Renewable Energy and Precision Medicine Applications</i> Professor Nianqiang “Nick” Wu, Chemical Engineering
2:00 pm – 2:30 pm	<i>Integrating Particles in Complex Fluids: A Story of Coacervates</i> Professor Maria Santore, Polymer Science & Engineering
2:30 pm – 3:00 pm	<i>In Situ Conversion of Copolymers at Liquid Interfaces</i> Professor Thomas Russell, Polymer Science & Engineering
3:00 pm – 3:30 pm	Break
3:30 pm – 5:30 pm	Poster Session
6:00 pm	Reception and Dinner at the UMass Campus Center, Marriott Center, 11 th Floor



Spring 2022 Polymer Event

University of Massachusetts Amherst

Thursday, May 26, 2022

Advances in Polymer Science and Engineering



POLYMER SCIENCE AND ENGINEERING
UNIVERSITY OF MASSACHUSETTS AMHERST

TIME:	SESSION:
8:30 am – 9:00 am	Arrival and Check-In
9:00 am – 9:30 am	<i>New Isomeric Silicones</i> Professor Thomas McCarthy, Polymer Science & Engineering
9:30 am – 10:00 am	<i>Cavitation and Fracture in Soft Materials: Connecting Macro Observations to Molecular Structure</i> Professor Alfred Crosby, Polymer Science & Engineering
10:00 am – 10:30 am	<i>A Hidden Relaxation Process in Poly(2-vinylpyridine) Homopolymers, Copolymers, and Nanocomposites</i> Professor Reika Katsumata, Polymer Science & Engineering
10:30 am – 10:40 am	Break
10:40 am – 11:00 am	<i>Block Copolymer Network Polymorphism</i> Michael Dimitriyev, Grason Research Group
11:00 am – 11:20 am	<i>Visualizing and Quantifying the Elasto-Adhesion Length Scale for Internal Soft Material Interfaces</i> Hongbo Fu, Crosby Research Group
11:20 am – 11:40 am	<i>Stress Relaxation in Dynamic Metal-Ligand Networks</i> Ipek Sagligil, Tew Research Group
11:40 am – 12:10 pm	<i>Polymers That Are Friendly and Safe: the New PFAS</i> Professor Todd Emrick, Polymer Science & Engineering
12:10 pm - 1:10 pm	Lunch in the Conte Atrium
1:10 pm – 1:30 pm	<i>Advances in Polymer Encapsulants for Oral Drug Delivery</i> Khatcher Margossian, Muthukumar Research Group
1:30 pm – 1:50 pm	<i>Characterization of the Self-Assembled Morphologies of Linear and Bottlebrush Copolymers in Bulk Phase and Thin Films</i> Mingqui Hu, Russell Research Group
1:50 pm – 2:10 pm	<i>The Role of Polymer-Induced Depletion Forces on Surface Interactions of Living, Growing Bacterial Cells</i> Wuqi Amy Nui, Santore Research Group
2:10 pm – 2:30 pm	<i>Rapid Fabrication of Structured Graphene Derived Micro-Supercapacitors using Photothermal Flash</i> Ayush Bhardwaj, Watkins Research Group
2:30 pm – 2:40 pm	Break



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2:40 pm – 3:10 pm

Towards Programmable Assembly Through Geometric Frustration
Professor Gregory Grason, Polymer Science & Engineering

3:10 pm – 3:40 pm

Nanoparticle Diffusion and Jamming at Liquid Surfaces
Professor David Hoagland, Polymer Science & Engineering

3:40 pm – 4:10 pm

Sustainability in Polymer Science, Challenges for Polymer Chemistry
Professor Bryan Coughlin, Polymer Science & Engineering