

Polymer Colloids 2022 Program

Saturday, February 19, 2022

6:30 PM *REGISTRATION BEGINS*

6:30 PM **WELCOME RECEPTION**

Sunday, February 20, 2022

7:30 AM *CONTINENTAL BREAKFAST*

LECTURE SESSION I

Discussion Leader: Wei Gao

- 8:30 AM **Yifan Li**, *Iowa State University of Science and Technology, USA*
Morphology evolution of Janus dumbbell nanoparticles in seeded emulsion polymerization **1**
- 9:00 AM **Yung-Chun Lin**, *University of New Hampshire, USA*
Tunable Multi-lobed Latex Morphology and 3D Porous Particle Assembly **2**
- 9:30 AM **Brunno Rocha**, *University of New Hampshire, USA*
Evaluation of the effects of incorporating charges and functional groups to lobes on the self-assembly of lobed colloidal particles **3**

10:00 AM *BREAK*

LECTURE SESSION II

Discussion Leader: Wenjun Wu

- 10:15 AM **Todd Squires**, *University of California, Santa Barbara, USA*
Delivering colloids to targets hidden within porous media **4**
- 10:45 AM **Paul Braun**, *University of Illinois Urbana-Champaign, USA*
Visualizing energy transport and dynamics in redox-active and responsive colloids **5**
- 11:15 AM **John Texter**, *Eastern Michigan University, USA*
Spontaneously dispersing condensation polymer colloids **6**

Sunday, February 20, 2022, CONT'D

11:45 AM	Shan Jiang , <i>Iowa State University of Science and Technology, USA</i> Design coating materials through self-stratification	7
12:15 PM	<i>LUNCH (OPEN AFTERNOON OR PARTICIPATION IN THE FOLLOWING TRAINING)</i>	
STUDENT AND YOUNG INVESTIGATOR TRAINING (Lunch provided for attendees)		
1:15 PM	Wenjun Wu , <i>Arkema Inc., USA</i> TUTORIAL: Roles of surfactant in synthesis and application of emulsion polymers	
2:00 PM	Panel discussion The role of polymer science and inclusive leadership in rapidly unlocking innovative Solutions	
2:30 PM	Wei Gao , <i>Dow Inc., USA</i> TUTORIAL: Characterization of polymer colloids and polymers made by emulsion polymerization using size-based separation techniques	
3:00 PM	Panel discussion Achieving career success: Tips on how to be successful at work	
3:45 PM	<i>END TRAINING SESSION</i>	
LECTURE SESSION III Discussion Leader: Danniebelle Haase		
4:00 PM	Ahyoung Kim , <i>University of Illinois Urbana-Champaign, USA</i> Polymer-patched "Nano-Legos": design and assembly in liquid cell	8
4:30 PM	Ray Fernando , <i>California Polytechnic State University, USA</i> Effects of latex and thickener polarities on rheology and colloidal stability of latex-HEUR mixtures	9
5:00 PM	Daniel Ou-Yang , <i>Lehigh University, USA</i> Visualizing diffusiophoresis and the spatiotemporal evolution of stress-strains in drying colloidal suspensions	10
5:30 pm	Samuel Wilson-Whitford , <i>Lehigh University, USA</i> Methods of microencapsulation of magneto-responsive microparticle suspensions	11
6:00 PM	<i>END DAILY SESSIONS</i>	
6:30 PM	POSTER SESSION AND RECEPTION	

Monday, February 21, 2022

HYBRID PROGRAM FOR BOTH IN-PERSON AND VIRTUAL ATTENDEES

7:00 AM CONTINENTAL BREAKFAST

LECTURE SESSION IV

Discussion Leaders: John Tsavalas, Xiangyi Zhang

7:30 AM	Eric Cloutet , <i>University of Bordeaux, FRANCE</i> Electro- and Photo-active polymer inks for printed organic electronics	12
8:00 AM	Athina Anastasaki , <i>ETH Zürich, SWITZERLAND</i> Shape-controlled nanoparticles from a low-energy nanoemulsion	13
8:30 AM	Steve Armes , <i>University of Sheffield, UK</i> RAFT aqueous dispersion polymerization	14
9:00 AM	Muriel Lansalot , <i>Université Claude Bernard Lyon 1, C2P2, FRANCE</i> Visible light-induced emulsion and dispersion photopolymerization	15
9:30 AM	Franck D'Agosto , <i>Université Claude Bernard Lyon 1, C2P2, FRANCE</i> Controlled radical and coordination-insertion polymerizations of ethylene to produce block copolymers nanoobjects by PISA	16
10:00 AM	Stefan Bon , <i>University of Warwick, UK</i> The Use of Macromonomers made by Catalytic Chain Transfer Polymerization in (Mini-)Emulsion Polymerization – A Mechanistic Study	17
10:30 AM	BREAK	

LECTURE SESSION V

Discussion Leaders: James Bohling, Michael Mazzotta

11:00 AM	François Ganachaud , <i>INSA Lyon, FRANCE</i> Lewis acid surfactant catalysis (LASC) of cationic polymerization in emulsion: state of the art and new understanding	18
11:30 AM	Ahilan Maniskaran , <i>Luxembourg Institute of Science and Technology (LIST), LUX</i> Green synthesis, mechanism, solvent & size-dependent property relationship of kraft lignin nanoparticles	19
12:00 PM	Sylvain Caillol , <i>CNRS, Institut Charles Gerhardt, Montpellier University, FRANCE</i> Aromatic biobased latex: from natural phenols to radical emulsion polymerization	20
12:30 PM	Paul Galanapoulo , <i>Université Claude Bernard Lyon 1, C2P2, FRANCE</i> One-step synthesis of degradable vinylic polymer-based latexes via aqueous radical emulsion polymerization	21
1:00 PM	Ahu Gümrah Dumanli-Parry , <i>University of Manchester, UK</i> Bioinspired soft composites and functional materials using self-assembly	22

Monday, February 21, 2022, CONT'D

1:30 PM *BREAK, LUNCH SERVICE*

LECTURE SESSION VI

Discussion Leaders: Stephen Foulger, Wei Gao

2:00 PM	Robin Hutchinson , <i>Queen's University, CANADA</i> Radical (co)polymerization kinetics in aqueous and organic solution: there is a difference!	23
2:30 PM	Michael Cunningham , <i>Queen's University, CANADA</i> Synthesis of diblock and triblock polymers from cyclooctadiene and norbornene via ROMP in miniemulsion	24
3:00 PM	Per Zetterlund , <i>University of New South Wales, AUSTRALIA</i> Synthesis of multiblock copolymer nanoparticles via RAFT emulsion polymerization	25
3:30 PM	Xiaoming Xu , <i>U.S. Food and Drug Administration, USA</i> Regulatory Perspective and Quality Considerations on Drug Products Containing Nanomaterials: Guidance and Research	26
4:00 PM	Qian Chen , <i>University of Illinois Urbana-Champaign, USA</i> Nanoscope view of polymer nanoparticles: surface patchiness and their in-situ TEM based "cinematography"	27
4:30 PM	<i>DAILY SESSION ENDS</i>	

Tuesday, February 22, 2022

7:30 AM *CONTINENTAL BREAKFAST*

LECTURE SESSION VII

Discussion Leader: Shan Jiang

8:00 AM	Connor Riahin , <i>University of Maryland, USA</i> Spectral tuning and surface-functionalization of semi-conductor polymer nanoparticles	28
8:30 AM	Mahesh Loku Yaddehige , <i>University of Mississippi, USA</i> Multifunctional fluorine-19 magnetic resonance imaging (¹⁹ F MRI) nanoparticles as theranostic agents	29

Tuesday, February 22, 2022, CONT'D

9:00 AM **TBD**

30

9:30 AM *BREAK*

LECTURE SESSION VIII
Discussion Leader: Wenjun Wu

10:00 AM **Andrew Lyon**, *Chapman University, USA*
A tight squeeze: Resistive pulse analysis of microgel translocation through nanopores **31**

10:30 AM **Liangfang Zhang**, *University of California, Santa Barbara, USA*
Biointerfacing of Polymeric Nanoparticles via Cell Membrane Cloaking for Drug Delivery and Biological Neutralization **32**

11:00 AM **John Tsavalas**, *University of New Hampshire, USA*
Cavity Containing Spherocylindrical Microparticles from Ordinary Polymer Dispersions in Flow **33**

11:30 AM **Bhuvnesh Bharti**, *Louisiana State University, USA*
A Colloids Perspective on Microplastics **34**

12:00 PM *LUNCH*

1:00 PM ANNOUNCE POSTER AWARD WINNER AND CLOSING REMARKS

STUDENT AND YOUNG INVESTIGATOR TRAINING

1:30 PM **John Tsavalas**, *University of New Hampshire, USA*
TUTORIAL: Insights into Emulsion Polymerization Mechanisms via Modeling

2:15 PM *Discussion Q&A*

THANK YOU FOR YOUR PARTICIPATION
