

2023

PROGRAM

**INSTITUTE FOR POLYMER RESEARCH
CELEBRATING 39 YEARS OF OFFICIAL INSTITUTE STATUS
FORTY-FIFTH ANNUAL SYMPOSIUM
ON POLYMER SCIENCE/ENGINEERING 2023
E7 7303-7363
Faculty Hall
University of Waterloo, Waterloo, Ontario
Wednesday, May 3, 2023**

8:45 a.m.	Open Symposium Portal
8:50	Welcome and Opening Remarks
9:00 - 9:20	Rohan Shorey, Chemical Engineering, Waterloo Unlocking the Potential of Lignin for Functional and Sustainable Material Solutions (Winner of 2022 IPR Award for Academic Excellence in Polymer Science/Engineering)
9:20 - 10:20	Industry Speaker: Dr. Jason Dockendorff, 3M. From Graduate School to Industry: Perspectives on Career Path and Some Interesting Discoveries and Projects Along the Way
10:20 – 10:45	<u>5-Min. Mini Presentations</u> 1) Zhe Huang Dual Effects of PVDF as a Binder Material on the Abnormal Voltage Behavior in the Initial Charge of Li ₂ S-based Li-S Battery 2) Xiguang Gao Coordination Polymers for Lithium-ion Batteries 3) Shahrzad Ghodrati Polymeric Sensing Materials for Energy Storage Devices 4) Naixin Zhao DOT-based Conductive Polymer via Direct Arylation 5) Andrew Stella Tailoring Novel Conductive Polymers for Flexible Toxic Gas Sensors
10:45 – 11:15	Coffee
11:15 – 11:35	Bhoomi Mavani Could Polymeric Materials Be Good Gas Detectors?
11:35-12:00	<u>5-Min. Mini Presentations</u> 6) Youchao Teng Biomass Hydrogels for Human Health Monitoring 7) Kyle Pieters Stabilization of Biodegradable Polymer Dispersions in Aqueous Medium 8) Rachel Blanchard

Conversion of PET Bottle Waste to Activated Carbon for Dye Contaminated Wastewater Treatment

9) Zahra Parsa

Utilizing Advanced Oxidation Process (AOP) for the Degradation of Water-Soluble Polymers

10) Dion Grobe

Thiazole N-oxide Conjugated Polymers for Low Exciton Binding Organic Electronics

12:00 - 1:00

Lunch E7 2357-2317

1:00 - 2:00

Academic presenter: Dr. Mario Gauthier Emeritus Member of the IPR

Controlled Architecture Polymers: What, Why and How?

2:00 – 2:20

Hunter Little

Persistence Length of Poly(oligo(ethylene glycol) methyl ether methacrylate)s Determined by Pyrene Excimer Formation

2:20 – 2:40

Kristijan Lulic

Persistence Length of Copolymers of Alkyl Methacrylates Probed by Pyrene Excimer Fluorescence

2:40 - 3:00

Azin Adibi , Chemical Engineering, Waterloo

Development of biopolymer coating with high barrier performance based on enzymatic polysaccharide and natural rubber for paper-based packaging applications

(Winner of the 2022 IPR Award for Academic Excellence in Polymer Science/Engineering)

3:00 -3:20

Ryan Lloyd

Interactions Between DNA and Pyrene-Labeled Gemini Surfactant Probed by Fluorescence and Dynamic Light Scattering

3:20-3:40

Coffee

3:40-4:00

Franklin Frasca

Conformation of Pyrene-Labeled Polyamines Established Through their Molecular Parameterization

4:00-4:20

Sanjay Patel

Conformation of PAMAM Dendrimers Probed by Pyrene Excimer Fluorescence

4:20-4:40

Donghan Liu

Conformation of Poly(γ -Benzyl Glutamate) in Organic Solvents

4:45

Closing remarks