2024

PROGRAM

INSTITUTE FOR POLYMER RESEARCH
CELEBRATING 40 YEARS OF OFFICIAL INSTITUTE STATUS
FORTY-SIXTH ANNUAL SYMPOSIUM
ON POLYMER SCIENCE/ENGINEERING 2024
E7 7303-7363
Faculty Hall
University of Waterloo, Waterloo, Ontario
Wednesday May 1 and Thursday May 2, 2024

8:45 a.m.	**Open Symposium Portal**
8:50	**Welcome and Opening Remarks**
9:00 - 9:20	**Sanjay Patel, Chemistry, Waterloo** Could PEF Become the New FRET? **(Winner of 20213 IPR Award for Academic Excellence in Polymer Science/Engineering)**
9:20 - 10:20	**Industry Speaker: Dr. Steven Teerstra, Arlanxeo.** Elastomers in Commercial Applications – BR, SBR, and Butyl Rubber in Tires to Chewing Gum
10:20 – 10:55	**Coffee**
10:55 – 11:20	**<u>5-Min. Mini Presentations</u>** **1) Shayan Ghasemi** Unlocking the Potential of Interfacial Assembly for Aerogel Bead Fabrication **2) Monica Ho** Polymer-MOF Composite Scaffolds for Direct Air CO2 Capture **3) Gillian Binley** Hydrogen Peroxide Induced Degradation of Polylactic Acid **4) Akliu Getnet Messele** Development of a Multi-filler Nanocompsite Film for the Application of X-ray Shielding **5) Ethan Crawford** Melt-blown Fibers for Oil Spill Remediation and Oil Barrier Geotextiles
11:20 – 11:40	**Ryan Lloyd** Studying the Interactions Between DNA and Cationic Surfactants By Pyrene Excimer Fluorescence and Dynamic Light Scattering
11:40 – 12:00	**Debela Tadele** "Co-encapsulation of Quercetin and α-Tocopherol bioactives in Zein Nanoparticles: Synergistic interactions, stability, and controlled release

12:00 - 1:00	**Lunch**
1:00 - 2:00	**Academic presenter: Prof. Alex Penlidis** Copolymerization Composition Control Policies: Batch, Semi-batch or Flow?
2:00 - 2:20	**<u>5-Min. Mini Presentations</u>** **6) Aline Braz Ramirez** 3D Printing of a Soft Gel with Bio-derived Solvent for Biomedical Applications **7) Shakiba Samsami** Chaotic 3D Printing of Cellulose Nanocrystal-based Hydrogels for the Fabrication of Electromagnetic Shields **8) Shikuan Xu** Chitosan thermosensitive hydrogel system **9) Tobechukwu Ohaka** Designing Recyclable Natural Rubber – CNC Vitrimers
2:20 - 2:40	**Saba Karimi** Thermal Expansion Study on Polymer Stable Glasses
2:40 – 3:00	**Mahnoor Mehmood** Characterization of Stable Polymer Glasses
3:00 - 3:20	**Hunter Little, Chemistry, Waterloo** **(Winner of the 2023 IPR Award for Academic Excellence in Polymer Science/Engineering)**
3:20-3:40	**Coffee**
3:40 – 4:00	**Franklin Frasca** Determining the Conformations of Pyrene-Labeled Polyamines and Polyols in Solution via Pyrene Excimer Fluorescence
4:00 -4:20	**Kristijan Lulic** Pyrene Excimer Formation as a means to Investigate Persistence Length of Alkyl Methacrylate Copolymers
4:20-4:40	**Shahrzad Ghodrati** Sensing the Invisible: An Overview of Polymeric Materials for Gas Detection
4:40-5:00	**Saheed Hadad** Highly Conductive Mxene Quantum Dots/StarchNanocomposite Polymer Electrolytes for All-Solid-State Lithium-Ion Batteries:Unveiling Insights for Future Sustainable Energy Storage

5:00-5:10 **<u>5-Min. Mini Presentations</u>**

10) **Estatira Amirieh**
    Conductive Bacteria Cellulosic Scaffolds
11) **Naixin Zhao**
    N-H Bearing Conjugated Polymer for Ion Sensing

5:10 **Closing remarks**