

**2016**

**PROGRAM**

**INSTITUTE FOR POLYMER RESEARCH  
CELEBRATING 32 YEARS OF OFFICIAL INSTITUTE STATUS  
THIRTY-EIGHTH ANNUAL SYMPOSIUM  
ON POLYMER SCIENCE/ENGINEERING 2016  
Conrad Grebel College  
Great Hall  
University of Waterloo, Waterloo, Ontario  
Wednesday, May 4, 2016**

---

8:30 a.m.	<b>Coffee</b>
8:50	<b>Welcome and Opening Remarks</b>
9:00 - 9:20	<b>Kai Cao , Chemistry, Waterloo (Winner of the 2015 IPR Award for Academic Excellence in Polymer Science/Engineering) Title: Synthesis and Self-assembly of Main-Chain Metal Carbonyl Organometallic Macromolecules Prepared by Migration Insertion Polymerization</b>
9:20 - 10:00	Industry Speaker: <b>Dr. Steve Brown NOVA Chemical Canada</b> Title:NOVA Chemical's Advanced Sclairtech™
10:00 – 10:25	<b><u>5-Min. Mini Presentations</u></b> <b>1) Zihe Pan</b> Development of Durable Multifunctional Microstructures with Electrical Conductivity and Superoleophobicity. <b>2) Dapeng Liu</b> Self-assembly of nanosheets by organometallic homopolymer PFpC3P <b>3) Liying Wang</b> Synthesis of Polylactide-b-polylysine Copolymers <b>4) Kishor Regmi</b> Statistical analysis of AGET ATRP of MMA in two-step emulsion system <b>5) Jesse Quinn</b> The synthesis and properties of pyrazino[2,3-g]quinoxaline-2,7-dione and pyrimido[4,5-g]quinazoline-4,9-dione based conjugated polymers and application in organic thin film transistors
10:25 - 10:40	<b>Coffee</b>
10:40 - 11:00	<b>Nimer Murshid</b> Aqueous Self-Assembly of Multifunctional Metal-Carbonyl Nanovesicles
11:00 – 11:20	<b>Justin Raimbault</b> Probing Intramacromolecular Forces by Pyrene Excimer Fluorescence

11:20 – 11:50

**5-Min. Mini Presentations**

**6) Kiarash Gholami**

The Study of Interactions between Viscosity Index Improvers and Wax by Fluorescence

**7) Kuo Yang**

Bonding Hydrogels to Both Plastic and Inorganic Surfaces

**8) Janine Thoma**

Probing the Conformations for Polymeric Bottle Brushes in Solution by Pyrene Excimer Formation

**9) Abdullah Ba Salem**

Probing the Interactions between Pyrene-labeled Gemini Surfactants and DNA by Fluorescence

**10) Ethan Massicotte**

Title: Simulation of the AGET ATRP of Butyl Acrylate in a Two-Stage Dispersed System

12:00 - 1:00

**Lunch**

1:00 - 1:40

Industry Speaker: **Prince Antony, Ph.D. | Sr. Research Specialist**  
**Technology Development Lab3M Canada Company,**  
Title: **Pressure Sensitive Adhesives & Related Products: A 3M Core Technology Platform**

1:40 – 2:00

**Kate Stewart**

Evaluation of Polymeric Nanocomposites for the Detection of Toxic Gas Analytes

2:00 – 2:20

**Remi Casier**

Comparison of the Diffusion Coefficients Obtained for Latex Film Formation Studied by FRET and Pyrene Excimer Formation

2:20 - 2:40

**Shiva Farhangi**

Probing Side Chain Dynamics of Branched Macromolecules by Pyrene Excimer Fluorescence

2:40 - 3:00

**Li Chen , Chemical Engineering, Waterloo**

Title: CdS quantum dot-functionalized cellulose nanocrystal for anti-counterfeiting applications

**(Winner of 2015 IPR Award for Academic Excellence in Polymer Science/Engineering)**

3:00 - 3:20

**Coffee**

3:20 - 3:40

**Lu li**

Conformation of Amylose in DMSO Probed by Pyrene Excimer Fluorescence

3:40 - 4:00

**Aklilu Worku**

Complex Arborescent Copolymer Architectures by Self-assembly

- 4:00 - 4:20      **Zhen Zhang**  
Grafting polystyrene on Cellulose (CNC) by surface initiated Atom Transfer Radical Polymerization (SI ATRP)
- 4:20 – 4:40      **Tori Hisko**  
Fluorescently Labelled Latex Particles to Monitor Film Formation
- 4:40 – 5:00      **Damin Kim**  
Characterization of Hydrophobic Modification of Starch NanoParticle by Pyrene Fluorescence
- 5:00              **Closing remarks**
- 6:00 - 7:30      **IPR Industrial Member DINNER**  
University Club, Main Dining Room
- 7:30 - 9:00      **Poster Presentations and Informal Get-together**  
University Club, Main Dining Room  
(IPR graduate students/researchers and symposium participants)

Poster presentations follow on next page

**INSTITUTE FOR POLYMER RESEARCH  
THIRTY-EIGHTH ANNUAL SYMPOSIUM  
ON POLYMER SCIENCE/ENGINEERING 2016  
POSTER SESSION  
WEDNESDAY, MAY 4, 2016  
UNIVERSITY CLUB  
7:30 – 9:00 pm**

Kiana Amini Chem. Eng., Waterloo	Liquid Crystalline Phases of Polymer Brushes
Deepak Vishnu Chemistry, Waterloo	Synthesis of cleavable amphiphilic block copolymers
Ethan Massicotte Chem. Eng., Ryerson	Monte Carlo Simulation of the AGET ATRP of Butyl Acrylate in a Two-Stage Dispersed System
Kate Stewart Chem. Eng., Waterloo	Detection of Toxic Analytes using a Sensor Array
Pendar Mahmoudi Chem. Eng., Waterloo	Entropic Segregation of Short Polymers to the Surface of a Polydisperse Blend
Alison Scott Chem. Eng., Waterloo	Benefits of Continuous Reactor Operation for Reactivity Ratio Estimation (Comparison with Batch Polymerization)
Kishor Regmi Chem. Eng., Ryerson	Statistical analysis of AGET ATRP of MMA in two-step emulsion system
Hunter Little Chemistry, Waterloo	Dimensions of Perylene-Labeled Foldamers in Solution Determined by Time-Resolved Fluorescence Anisotropy
Janine Thoma Chemistry, Waterloo	Probing the Conformations for Polymeric Bottle Brushes in Solution by Pyrene Excimer Formation
Russell Spencer	Field-Theoretic Monte Carlo Simulations of Ternary Blends