



## Symposium in Honour of Prof. Archie E. Hamielec of McMaster University



**40+ Invited speakers**



**From 30+ institutions**



**Across 10+ countries**

*A series of talks organized to honour the enduring legacy of Archie E. Hamielec, one of the founders of polymerization reaction engineering*

*Including a featured talk from the symposium organizers João B. P. Soares, Alex Penlidis, Shiping Zhu, and Hidetaka Tobita, titled “Celebrating Archie’s Vision in Chemical Engineering”*

Canadian Chemical Engineering Conference

**CSChE** **CALGARY**  
**2023** OCTOBER 29 - NOVEMBER 1

Transitions: Materials, Energy, and the Environment



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Siripon Anantawarkul	Application of AI and machine learning in olefin polymerization
Amanda Brandao	Let's accelerate direct Monte Carlo models
Markus Busch	From process to polymeric microstructure – A journey through experiment, modeling & simulation and polymer characterization
Paul Charpentier	Polymer assembly and disassembly: Using supercritical fluids towards a sustainable future
Phillip Choi	Applications of solubility parameters in macromolecular design
Michael Cunningham	Using carbon dioxide as a trigger to reversibly “switch” polymer properties
Marc Dube	Cellulose nanocrystals and polymers – Improving performance with sustainable materials
Hong Fan	TBA
Santiago Faucher	TBA
Reinaldo Giudici	Kinetics of acrylic acid polymerization in aqueous solution
Sarang Gumfekar	Synthesis and rheological study of polyelectrolyte hydrogels
Andy Hrymak	Thermoset/graphene polymer composites
David Hunkeler	Crude oil removal from water: Effect of inorganic impurities and the composition of the organic phase
Robin Hutchinson	Radical polymerization kinetics in aqueous and organic solution: There is a difference!
Joserra Leiza	Towards degradable and biobased polymers by free-radical polymerization
Pingwei Liu	Two-dimensional polymer reaction engineering
Weifeng Liu	Applications of industrial lignin in polymer materials
Zhenghong Luo	The role of big AI in polymerization engineering
Kim McAuley	Mathematical modelling for 1,6-hexanediol diacrylate photopolymerization for high-speed printing applications
Tim McKenna	A new gas phase process for ultra high molecular weight polyethylene: Crystallization vs. chain growth



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Robert Pelton	Linking solution properties of antimicrobial polymers to biocidal activity
Alex Penlidis	Polymer synthesis to novel applications to polymeric sensors
Jose Carlos Pinto	Towards a green rubber: Exploring myrcene polymerization processes
Enrique Saldivar-Guerra	Precise mathematical description of the particle size distribution in emulsion polymerization
Alison Scott	Can polymer flooding in EOR benefit from a sequential polymer design?
João Soares	Polymer microstructure deconvolution methods: What are they good for?
Katherine Stewart	Mixing rules for virgin and recycled polyethylene-polypropylene blends
Giuseppe Storti	Closing and opening rings as a route to effective synthesis and recycle of polyesters
Fouad Teymour	Understanding hydrogels beyond Flory-Rehner
Hidetaka Tobita	Dimensions of network polymers: A universal relationship
Vasileios Touloupidis	A unified polymer reaction engineering methodology for catalytic olefin polymerization: From reaction conditions and catalyst reaction performance to molecular and rheological properties for forward, reverse engineering and deconvolution applications
John Tsavalas	Early bird gets the network: The relative importance of reactivity ratios, $\Psi$ parameter, and crosslinker level on gel formation in FRP
Eduardo Vivaldo-Lima	Development of technologies and mathematical models for biorefining processes based on lignocellulosic biomasses
Wen-Jun Wang	Development of high-performance polyolefin elastomers
Huining Xiao	Functional-modified natural polymers for tackling environmental issues
Zhibin Ye	Star polyethylenes by coordinative polymerization
Qi Zhang	Ionic liquid-based functional materials
He Zhu	Controlled fabrication of hierarchically porous composite materials
Shiping Zhu	Kinetic modeling and process digitalization for polymer product upgrading