



## SUNDAY, SEPTEMBER 22, 2019

2:00 PM	REGISTRATION	
3:00 PM	<b>Jerzy Klosin</b> Welcome and Introductory Remarks	
<b>KEY NOTE ADDRESS SESSION</b>		
Discussion Leaders: Rick Register, Ken Wagener, Jerzy Klosin, Pal Arjunan, and João Soares		
3:10 PM	<b>John Bercaw</b> (Caltech) McGrath Lecture: <i>Synthetic and Mechanistic Studies of Olefin Trimerization and Polymerization with Organometallic Catalysts</i>	1
4:10 PM	<b>Vinicius Grassi</b> (Braskem) <i>Braskem's positioning on Circular Economy and Recycling of Polymers</i>	2
4:45 PM	BREAK	
5:00 PM	<b>Kyoko Nozaki</b> (Tokyo University) <i>Copolymerization of Olefins with Polar Monomers Catalyzed by Group 10 Metal Complexes</i>	3
5:35 PM	<b>Peter Callais</b> (Townsend Solutions) <i>Polyolefins Markets</i>	4
6:10 PM	<b>Greg Rutledge</b> (MIT) <i>Modeling of Polyolefin Crystallization</i>	5
6:45 PM	WELCOME RECEPTION	

## MONDAY, SEPTEMBER 23, 2019

7:00 AM	CONTINENTAL BREAKFAST	
<b>INVITED LECTURE SESSION II</b>		
Discussion Leader: Don Morrison (Entegris)		
8:00 AM	<b>Jill Martin</b> (Dow) <i>Polyolefin Sustainability from Polyolefin Producer Perspective</i>	6
8:35 AM	<b>John Layman</b> (P&G) <i>Polyolefin Recycling at P&amp;G and Beyond</i>	7
9:10 AM	<b>Jeff Fodor</b> (Chevron Phillips Chemical Co.) <i>Relating Polyethylene Microstructure to Resin Properties</i>	8
9:45 AM	BREAK	
<b>INVITED LECTURE SESSION III</b>		
Discussion Leader: Sally Lawrence (NOVA Chemicals)		
10:15 AM	<b>Julie Anderson</b> (PepsiCo) <i>PepsiCo's Flexible Packaging Sustainability Journey</i>	9
10:50 AM	<b>Karen Winey</b> (University of Pennsylvania) <i>Self-Assembly of Periodic Polyethylene Sulfonates: Layered, Bicontinuous Gyroid, and Hexagonal Nanoscale Morphologies for Transport</i>	10
11:25 AM	<b>Bun Yeoul Lee</b> (Ajou University) <i>Synthesis of Polyolefin-Based Triblock Copolymers</i>	11
12:00 PM	LUNCH	



## MONDAY, SEPTEMBER 23, 2019, CONT'D

<b>INVITED LECTURE SESSION IV</b>		
Discussion Leader: Kazuo Takaoki (Sumitomo Chemicals)		
1:15 PM	<b>Daniel Read</b> (University of Leeds) <i>Molecular Rheology and Flow-Induced Crystallization</i>	12
1:50 PM	<b>Sudhin Datta</b> (ExxonMobil) <i>Compatibilization in Polyolefin Rubber – Isotactic Polypropylene Blends</i>	13
2:25 PM	<b>Vincenzo Busico</b> (University of Naples) <i>High Throughput Experimentation Aided QSAR Modeling of Olefin Polymerization Catalysts: Another Step towards Catalyst Design</i>	14
3:00 PM	BREAK	
<b>INVITED LECTURE SESSION V</b>		
Discussion Leader: Mari Rosen (The Dow Chemical Company)		
3:30 PM	<b>Gabriele Mei</b> (LyondellBasell) <i>Recent Developments in Polyolefin Catalysts, Hyperzone PE Process Technology, and Recycling/Sustainability Innovation</i>	15
4:05 PM	<b>Rheft Kempe</b> (University of Bayreuth) <i>Efficient and Controlled Catalytic Synthesis of Functionalized Hydrocarbons from Ethylene</i>	16
4:40 PM	<b>Rongjuan Cong</b> (The Dow Chemical Company) <i>Journey towards Ideal Tools to Characterize Polyolefin Structure</i>	17
5:15 PM	<b>Geoff Coates</b> (Cornell University) <i>Synthesis of New Polyolefin Architectures</i>	18
5:50 PM	RECEPTION AND POSTER SESSION	

## TUESDAY, SEPTEMBER 24, 2019

7:00 AM	CONTINENTAL BREAKFAST	
<b>INVITED LECTURE SESSION VI</b>		
Discussion Leader: Fumihiko Shimizu (Mitsubishi Chemical Corporation)		
8:00 AM	<b>João Soares</b> (University of Alberta) TBA	19
8:35 AM	<b>Nathan Mehl</b> (Milliken) <i>Enhancing the Optical Performance of Extrusion Blow Molded PP</i>	20
9:10 AM	<b>Francisco Perez</b> (SABIC) <i>Applying Structure/Properties Modelling in Polyethylene Polymerization Technologies</i>	21
9:45 AM	BREAK	

## TUESDAY, SEPTEMBER 24, 2019, CONT'D

<b>INVITED LECTURE SESSION VII</b>		
Discussion Leader: Thomas Gungor (Tosoh Bioscience)		
10:15 AM	<b>Megan Robertson</b> (University of Houston) <i>Thermodynamic Interactions in Polydiene/Polyolefin Blends</i>	22
10:50 AM	<b>Justin Kennemur</b> (Florida State University) <i>Performance Elastomers from New Advances in Ring-Opening Metathesis Polymerization of Low-Strain Cycloalkenes</i>	23
11:25 AM	<b>Andreas Albrecht</b> (Borealis Polyolefins GmbH) <i>Analytical Strategies to Analyse the Chemical Heterogeneity of Polypropylene</i>	24
12:00 PM	LUNCH	
<b>INVITED LECTURE SESSION VIII</b>		
Discussion Leader: Hamid Almegren (KACST)		
1:15 PM	<b>Wei Xu</b> (Saudi Aramco) <i>Antifouling Additives Technology (AFA™) ----- A R&amp;D answer to Industrial challenges</i>	25
1:50 PM	<b>Brian Long</b> (University of Tennessee) <i>Modulating Polyolefin Microstructure via Stimuli-Mediated, Redox-Active Ni(II) <math>\alpha</math>-Diimine Catalysts</i>	26
2:25 PM	<b>Markus Busch</b> (Technical University of Darmstadt) <i>For Process to Properties – Understand the Control of Microstructure in World-Scale Processes</i>	27
3:00 PM	BREAK	
<b>INVITED LECTURE SESSION IX</b>		
Discussion Leader: Larry Sita (University of Maryland)		
3:30 PM	<b>Juraj Kosek</b> (University of Prague) <i>Electrostatic Charging of Polyolefin Particles on the Particle Level</i>	28
4:05 PM	<b>Bodo Richter</b> (Evonik) <i>Catlyen® S 300 – a Spherical Mg-Ethanolate Support for Ziegler Natta Catalysts of Superior ICP-PP Capability and Well-Defined Particle Morphology</i>	29
4:40 PM	<b>David Fiscus</b> (ExxonMobil) <i>Developing Structure-Process-Property Relationships using Multivariate Analysis</i>	30
5:15 PM	<b>Gerard van Doremale</b> (Arlanxeo) <i>Bimodal copolymers with single guanidinato catalyst as example how catalyst and process technology are key for EPDM developments</i>	31
6:00 PM	COCKTAILS SERVED	
6:30 PM	BANQUET	



**WEDNESDAY, SEPTEMBER 25, 2019**

7:00 AM	CONTINENTAL BREAKFAST	
<b>INVITED LECTURE SESSION X</b>		
Discussion Leader: Gail Blakley (Grace)		
8:00 AM	<b>Michelle Sing</b> (Braskem) <i>Polyolefins in Additive Manufacturing</i>	32
8:35 AM	<b>Markus Klapper</b> (Max Planck Institute) <i>Morphology Control in Olefin Polymerization by Supporting Procedures</i>	33
9:10 AM	<b>Scott Milner</b> (Pennsylvania State University) <i>Chi Parameters from MD Simulations for Real Polymers</i>	34
9:45 AM	BREAK	
<b>INVITED LECTURE SESSION XI</b>		
Discussion Leader: Don Baird (Virginia Tech)		
10:15 AM	<b>Massimiliano Delferro</b> (Argonne National Laboratory) <i>Catalytic Recycling and Upcycling of Polyolefins</i>	35
10:50 AM	<b>Brad Carrow</b> (Princeton University) <i>Complementary Functional Polyolefin Architectures by Uni- and Bidirectional Insertion Polymerization</i>	36
11:25 AM	<b>Pal Arjunan, João Soares, Ken Wagener, Rick Register, and Jerzy Klosin</b> <i>Closing Remarks</i>	



## MONDAY, SEPTEMBER 23, 2019

### **POSTER PROGRAM**

<b><u>Sebastian Babik</u></b> Evonik Resource Efficiency GmbH (Germany) <i>Novel Amorphous Poly Alpha Olefins (APAOs) as additives for classic polyolefins</i>	1
<b><u>Amirreza Badri, Saeid Mehdiabadi, and João B.P. Soares</u></b> University of Alberta (Canada) <i>A more detailed study on Thermal Gradient Interaction Chromatography (TGIC), Simultaneous Effect of Molecular Weight, Comonomer Content and Comonomer Type</i>	2
<b><u>Jun Won Baek and Bun Yeoul Lee</u></b> Ajou University (South Korea) <i>Synthesis of Polystyrene-Polyolefin-Polystyrene Triblock Copolymer using Dialkylzinc Contained Styrene</i>	3
<b><u>Timothy McKenna, Yashmin Rafante Blazzio, Nida Othman, and Sebastian Norsic</u></b> CNRS/CPE (France) <i>A Novel Stopped-Flow Reactor for Gas-Phase Olefin Polymerization</i>	4
<b><u>Miloud Bouyahyi, Lidia Jasinska-Walc, and Rob Duchateau</u></b> SABIC Technology & Innovation (the Netherlands) <i>Randomly Functionalized Polyethylenes – In Quest of Avoiding Catalyst Deactivation</i>	5
<b><u>Sabrina da Silva, Raquel Zilz, Igo Boeira, Rafael Stieler, Adriana Casagrande, and Osvaldo Casagrande Jr.</u></b> Federal University of Rio Grande do Sul (Brazil) <i>Binuclear Catalysts based on Phenoxyimine Ligands for Production of Oligomers and Polyethylene</i>	6
<b><u>Xuejian Chen, Jialin Qiu, Carlos López-Barrón, Brian Rohde, Megan Robertson, and Ramanan Krishnamoorti</u></b> University of Houston (United States) <i>Thermodynamic Interactions in Blends of Butene-Ethylene Copolymers and 1,4-Polyisoprene</i>	7
<b><u>Yanshan Gao and Tobin Marks</u></b> Northwestern University (United States) <i>Synthesis of Polyolefins with Controlled Microstructures using Single Site Group 4 Transition Metal Catalysis</i>	8
<b><u>Virendra Kumar Gupta</u></b> Reliance Research and Development Centre (India) <i>High Performance Impact Copolymer of Polypropylene: Advanced RELCAT™ Technology</i>	9

<b><u>Jong Yeob Jeon and Chulsung Bae</u></b>	10
Rensselaer Polytechnic Institute (United States) <i>Preparation of Polyolefin based Anion Exchange Membranes by Friedel-Crafts Alkylation</i>	
<b><u>Li Jia</u></b>	11
University of Akron (United States) <i>Dual-Site Zwitterionic Ni(II) Catalysts for Carbonylative Copolymerization of Ethylene and Cyclic Ethers</i>	
<b><u>Zhongbao Jian</u></b>	12
Changchun Institute of Applied Chemistry (China) <i>Functionalized Polyolefins: Strategy on Design of both Polar Monomers and Group 10 Catalysts</i>	
<b><u>Tae Jin Kim and Bun Yeoul Lee</u></b>	13
Ajou University (South Korea) <i>Synthesis of ABA-Type Olefin Triblock Copolymers base on Peroxide-Mediated Alkyl-Alkyl Coupling of Diaalkylzine</i>	
<b><u>Juraj Kosek, Alexandr Zubov, Klára Jindrová, Martina Lásková, and Miloš Svoboda</u></b>	14
University of Chemistry and Technology Prague (Czech Republic) <i>Morphology of Polyolefin Particles: Evolution, Transport and Phase Distribution</i>	
<b><u>Juraj Kosek, Lenka Krajáková, Josef Chmelař, Jakub Klimošek, and Patrik Schneider</u></b>	15
University of Chemistry and Technology Prague (Czech Republic) <i>Thermodynamics of Sorption of Gas and Liquid Penetrants in Polyethylene</i>	
<b><u>Hyun Ju Lee and Bun Yeoul Lee</u></b>	16
Ajou University (South Korea) <i>Synthesis of Long-Chain Branched Polyolefins through Coordinative Chain Transfer Polymerization</i>	
<b><u>Thomas Mustard, Thomas Hughes, Art Bochevarov, Leif Jacobson, H. Shaun Kwak, Tsuguo Morisato, Caroline Krauter, Sudharsan Pandiyan, and Mathew Halls</u></b>	17
Schrödinger (United States) <i>High throughput in Silico Reaction Screening for Tailored Catalytic Reactivity and Selectivity</i>	
<b><u>João Neto, Amanda Brandão, and João Soares</u></b>	18
Pontifical Catholic University of Rio de Janeiro (Brazil) <i>Evaluation of Artificial Neural Network Implementation for Predicting Main Characteristics of Polyolefins from Polymerization Operating Variables</i>	
<b><u>Sara Orski, Luke Kassekert, Wesley Farrell, Grace Kenlaw, Marc Hillmyer, and Kathryn Beers</u></b>	19
National Institute of Standards and Technology (United States) <i>Design and Characterization of Model Linear Low-Density Polyethylenes by Multi-Detector Size Exclusion Chromatography</i>	



<b><u>Hee Soo Park, Seon Kim, and Bun Yeoul Lee</u></b>	20
Ajou University (South Korea) <i>Extremely Active Ethylene Tetramerization Catalyst avoiding the use of MAO</i>	
<b><u>Jialin Qiu, Xuejian Chen, Carlos López-Barrón, Megan Robertson, and Ramanan Krishnamoorti</u></b>	21
University of Houston (United States) <i>Thermodynamic Interactions in Polydiene/Polyolefin Blends</i>	
<b><u>Raunil Raj, Saeid Mehdiabadi, and João Soares</u></b>	22
University of Alberta (Canada) <i>Experimental Validation of the Molecular Weight Distribution and Chemical Composition Distribution Deconvolution Method for Polyolefins made with Ziegler-Natta Catalysts</i>	
<b><u>Gerold Rittenschober, Vasileios Touloupidis, and Christian Paulik</u></b>	23
Johannes Kepler University Linz (Austria) <i>Influence of Slurry Polymerization Conditions on the Polyethylene Molecular Weight Distribution</i>	
<b><u>M. Rosen, S. Boelter, D. Davies, J. Klosin, K. Milbrandt, D. Mort, A. Smith, D. Welsh, D. Wilson, and M. Wiltzius</u></b>	24
The Dow Chemical Company (United States) <i>Chromium Catalysts with Phospholane Ligands for Ethylene Tetramerization</i>	
<b><u>Nattamai Bhuvanesh, Jessica DeMott, S. Olivia Gunther, Rafael Huacuja, Jerzy Klosin, Alex Kosanovich, Qingheng Lai, Oleg Ozerov, David Pearson, Loren Press, and Todd Senecal</u></b>	25
The Dow Chemical Company (United States) <i>Development of Activators Based on Carborane Anions for Molecular Olefin Polymerization Catalysts</i>	
<b><u>Peter De Witte and Francisco Perez Valencia</u></b>	26
SABIC Technology Center Geleen (the Netherlands) <i>Development of a Kinetic Model for Ethylene Polymerization</i>	
<b><u>Zhe Zhou</u></b>	27
The Dow Chemical Company (United States) <i>Advancing Polyolefin Structural Analyses via NMR</i>	
<b><u>Bo Liu</u></b>	28
Changchun Institute of Applied Chemistry, Chinese Academy of Sciences (China) <i>Chain Shuttling Polymerization of Ethylene and Styrene</i>	
<b><u>Dylan J. Walsh, Tianwei Yan and Damien Guironnet</u></b>	29
University of Illinois at Urbana-Champaign (United States) <i>General Route for the Preparation of Olefin based Block-Copolymers</i>	