

7th ICPC Technical Program

October 22-24, 2018
Royal Sonesta Houston Galleria Hotel

SHORT COURSE		(Founders 3&4 Room)
Sunday		October 21, 2018
7:30 - 8:15	Registration Short Course (Founders Room Pre-Function Area)	
8:15 - 18:00	Short Course on Polyolefin Characterization Techniques (Founders 3&4 Room)	
CONFERENCE Registration and Welcome (Sunday, October 21 st)		
18:00 – 19:00	Conference registration (Founders Room Pre-Function Area)	
19:00 – 21:00	Welcome Cocktail (Balcony)	

CONFERENCE PROGRAM		(Founders Ballroom)
Monday		October 22, 2018
7:15- 18:00	Registration (Founders Room Pre-Function Area)	
8:30 - 8:45	Opening Remarks	Raquel Ubeda
8:45 - 9:35 Keynote Speaker	Jennifer Ronk Dow Plastics & Specialty Packaging (USA) Plastics Recycling in a Circular Economy	
9:35 - 10:00	Vasileios Touloupidis , Andreas Albrecht, Elena Pomakhina Borealis Polyolefine (Austria) Polymer Reaction Engineering: Linking Catalyst, Process and Polymer Properties	
10:00 - 10:30	Coffee Break (Founders Room Pre-Function Area)	
SESSION 1 Separation		Moderator: Colin Li Pi Shan
10:30 - 10:55	Robert Brüll , Jan-Hendrik Arndt, Gordian P. Horchler Fraunhofer Institute, LBF (Germany), Asymmetric Flow Field Flow Fractionation – New Perspectives for Routine Molar Mass and Long-chain Branching Characterization of Polyolefins	
10:55 - 11:20	James H Wade ¹ , Emily H Mordan ² , Eric Pearce ¹ , Willem deGroot ¹ , Ryan C Bailey ² , David M Meunier ¹ ¹ The Dow Chemical Company (USA), ² University of Michigan (USA) Development of a Universal and Gradient Compatible Mass Concentration Detector for Polyolefin Separations	

11:20 - 11:45	Alberto Ortín , Benjamín Monrabal Polymer Char (Spain) Ongoing Development of a Refractometer for Solvent Gradient Interaction Chromatography of Polyolefins
11:45 - 12:10	Shuhui Kang , Pat Brant, Jennifer Rapp ExxonMobil Chemical Company (USA) Determining the Actual Molecular Weight, Polydispersity and Oligomer Composition for Low MW Polyolefin
12:10 - 12:35	Jan-Hendrik Arndt ¹ , Robert Brüll ¹ , Tibor Macko ¹ , Priya Garg ² , Jacques Tacx ² ¹ Fraunhofer Institute, LBF (Germany), ² SABIC (The Netherlands) Characterization of the Chemical Composition Distribution of POP/POE by HPLC
12:35 - 13:30	<i>Lunch (Discovery Center A)</i>
SESSION 2 Rheology <i>Moderator: Wallace Yau</i>	
13:30 - 13:55	Yongwoo Inn Chevron Phillips Chemical Company (USA) Application of Creep Test Method to Extend the Dynamic Rheology Data to Low Frequency range for Polyethylene
13:55 - 14:20	Anton Ginzburg , Lidia Jasinska-Walc, Luca Rongo, Artur Rozanski, Miloud Bouyahyi, Vaidyanath Ramakrishnan, Rob Duchateau SABIC (The Netherlands) Rheology of Compatibilized Polypropylene/Polycarbonate Blends
14:20 - 14:45	Wayne F. Reed ¹ , Joao Soares ² , Michael F. Drenski ³ , Alex W. Reed ³ ¹ Tulane University (USA), ² Univeristy of Alberta (Canada), ³ Fluence Analytics (USA) Background on ACOMP (automatic continuous online monitoring of polymerization reactions) and a plan for application to polyolefin production
14:45 - 15:15	<i>Coffee Break (Founders Room Pre-Function Area)</i>
SESSION 3 Separation <i>Moderator: Thippaya Pathaweisariyakul</i>	
15:15 - 15:40	Youlu Yu , Yongwoo Inn Chevron Phillips Chemical Company (USA) Unlock LDPE Architectural Secrets by SEC-MALS Combined with Rheology
15:40 - 16:05	Zengrong Zhang NOVA Chemicals Corporation (Canada) Characterization of Long Chain Branching (LCB) in Ethylene Interpolymers
16:05 - 16:30	Jorge Jardim Silva , Manoela Ellwanger Cangussú, Laura Nyland, Fernando Silveira, Luis Paulo Bernardi Braskem (Brazil) Evaluation of Thermorheology and Arnett Plot as Tools to Detect Long-Chain Branching in Polyolefins

POSTER SESSION (Monday) <i>(Founders Ballroom)</i>	
16:45	Posters Introduction (1 min. / poster)
17:25	Posters Area Visit <i>(open until the end of the Conference).</i>
18:30	Cocktail <i>(Posters and Exhibitors Area)</i>

Tuesday		October 23, 2018
SESSION 4 Separation		<i>Moderator: David Gillespie</i>
8:45 - 9:10	Andreas Albrecht¹ , Ljiljana Jeremic ¹ , Harald Pasch ¹ , Anthony Ndiripo ² ¹ Borealis Polyolefine (Austria) ² University Stellenbosch (South Africa) Analysis of the Xylene Soluble Fraction in Heterophasic Polypropylene	
9:10 - 9:35	ZU Fenghua , WANG Li, LI Rongbo, YI Jianjun Petrochina Petrochemical Research Institute (China) Study on Structure-Property Relationship of High Impact Ethylene-propylene Copolymer	
9:35 - 10:00	Nathan Cole , Youlu Yu, Paul DesLauriers, Melvin Hidebrand Chevron Phillips Chemical Company (USA) Development of an In-house Rapid GPC System for PE Manufacturing Plant QC Applications	
10:00 - 10:30	<i>Coffee Break (Founders Room Pre-Function Area)</i>	
SESSION 5 Spectroscopy and Additivation		<i>Moderator: Willem DeGroot</i>
10:30 - 10:55	Rufina Álamo , Xiaoshi Zhang, Laura Santoja-Blasco Florida State University, FSU (USA) Spectroscopic and X-Ray Characterization of the Crystalline Packing of Ethylene Copolymers with Equidistant Placement of Co-units	
10:55 - 11:20	Zhe Zhou , Dan Baugh, Philip P. Fontaine, Yiyong He, Zhi Shi, Sukrit Mukhopadhyay, Rongjuan Cong, Bill Winniford, Matt Miller The Dow Chemical Company (USA) Long-Chain Branch Measurement in Substantially Linear Ethylene Polymers by ¹³C NMR with Halogenated-Naphthalenes as Solvents	
11:20 - 11:45	Yusuke Hiejima , Takumitsu Kida, Koh-hei Nitta Kanazawa University (Japan) Raman Spectroscopic Observation of Morphological Changes in Polyolefins Under Various Environments	
11:45 - 12:10	Antônio Marchi Netto , Regina Funck Nonemacher, Songsheng Zhang Braskem (Brazil) Upgrading the ¹³C-NMR View Using a Cryo Sensor	
12:10 - 12:35	Gang Zhang , Wei Zhu, T.C. Mike Chung Penn State University (USA) Novel Polypropylene Copolymers with Bonded Hindered Phenol groups: synthesis, crosslinking, and application Under Elevated Temperature Conditions (>140°C)	
12:35 - 13:30	<i>Lunch (Discovery Center A)</i>	

SESSION 6 Modeling 3*Moderator: João Soares*

13:30 - 13:55	Sara Orski , Wesley Farrell, Luis Fernando Vargas Lara, Kathryn Beers Materials Science and Engineering Division, National Institute of Standards and Technology, NIST (USA) Synthetic Approaches to Polyolefin Reference Materials: Design and Characterization of Architecturally 'Perfect' LLDPEs
13:55 - 14:20	Siripon Anantawaraskul ¹ , Chat Hornchaiya ¹ , Tamed Chayrattanoj ¹ , Saeid Mehdiabadi ² , João B. P. Soares ² ¹ Kasetsart University (Thailand) ² University of Alberta (Canada) Simultaneous Deconvolution of Bivariate Molecular Weight and Chemical Composition Distribution Obtained from TREFxGPC Cross-fractionation Characterization (CFC) of Ethylene/1-Olefin Copolymers
14:20 - 14:45	Sander Niessen , Raffaele Bernardo, Bart van Weyde, Gerard van Doremale, Alexandra Berthoud ARLANXEO (The Netherlands) High Throughput Analysis for Catalyst Development of EPDM
14:45 - 15:15	<i>Coffee Break (Founders Room Pre-Function Area)</i>
SESSION 7 Properties / Structure	
<i>Moderator: Alberto Ortin</i>	
15:15 - 15:40	Iakovos Vittorias , Katharina Elsas, Volker Dolle Lyondellbasell (Germany) Prediction of Final Polymer Properties Using Molecular Characterization and Fractionation for HDPE
15:40 - 16:05	Christian Paulik , Gunnar Spiegel Johannes Kepler University Linz (Austria) Tuning Polyolefin Properties for 3d Printing Applications
16:05 - 16:30	David M. Fiscus Exxon Mobil Chemical Company (USA) Developing Structure-Process-Property Relationships using Multivariate Analysis
16:45	Vendor Session
18:30	Vendors Cocktail (<i>Exhibitors Area</i>)

Wednesday		October 24, 2018
SESSION 8 Separation		<i>Moderator: Benjamín Monrabal</i>
8:45 - 9:10	Rongjuan Cong , Willem deGroot, Michael Cheatham The Dow Chemical Company (USA) Recent Advances and Challenges in Polyolefin Comonomer Distribution Analysis	
9:10 - 9:35	Anthony Ndiripo , Harald Pasch Stellenbosch University (South Africa) Retention of Polypropylene Stereoisomers on Porous Graphitic Carbon as Influenced By Column Temperature and Type of Adsorption Promoting Solvent	
9:35 - 10:00	Derek Lohmann ¹ , Peter Montag ² , Claudia Lohmann ¹ Polymer Standards Service (¹ USA, ² Germany) Comparison of TGIC and HT-HPLC for Complex Polyolefin Systems	
10:00 - 10:30	<i>Coffee Break (Founders Room Pre-Function Area)</i>	
SESSION 9 Morphology		<i>Moderator: Rufina Álamo</i>
10:30 - 10:55	Carlos R. López-Barrón , Andy Tsou, John Hagadorn, Joseph Throckmorton ExxonMobil Chemical Company (USA) Combining Time-resolved In-situ Rheo-SANS, Rheo-SAXS and Rheo-SALS to Study Molecular and Crystal Alignment of Well-Entangled α-Olefin Molecular Bottlebrushes during Uniaxial Deformation	
10:55 - 11:20	Brian M. Habersberger , Daniel Baugh III, Greg Meyers, Mark Rickard, Carl Reinhardt, Jamie Stanley The Dow Chemical Company (USA) Deuterium Exchange Enables Powerful Analytical Methods in Polyolefins	
11:20 - 11:45	Paul S. Eselem Bungu , Harald Pasch Stellenbosch University (South Africa) Selectivity of Thermal Fractionation in the Branching Analysis of Low Density Polyethylene	
11:45 - 12:10	Xuejian Chen ¹ , Carlos López-Barrón ² , Rufina G. Alamo ¹ ¹ FAMU-FSU College of Engineering (USA) ² ExxonMobil Chemical Company (USA) Effect of Branching Distribution on Liquid-Liquid Phase Separation in Broad Ethylene Copolymers	
12:10	Final Remarks, Lunch and Goodbye (<i>Lunch at Summit and ARA Restaurant</i>)	