

# 7<sup>th</sup> ICPC Poster Presentations

## #1· Asymmetric Flow Field Flow Fractionation – A Novel Approach for Routine Analysis of Polyolefins

**Jan-Hendrik Arndt**<sup>1</sup>, Robert Brüll<sup>1</sup>, Gordian P. Horchler<sup>1</sup>, Tibor Macko<sup>1</sup>, Dibyaranjan Mekap<sup>2</sup>, Edwin P. C. Mes<sup>2</sup>, David T. Gillespie<sup>3</sup>, David Meunier<sup>3</sup>, Willem de Groot<sup>3</sup>

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## #2· Asymmetric Flow Field Flow Fractionation – Gaining Insight Into Long Chain Branching of PP

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## #3· Asymmetric Flow Field Flow Fractionation – New Perspectives for Routine Analysis of Polyolefins

**Jan-Hendrik Arndt**<sup>1</sup>, Robert Brüll<sup>1</sup>, Gordian P. Horchler<sup>1</sup>, Tibor Macko<sup>1</sup>, Youlu Yu<sup>2</sup>

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## #4· Functionalized Polyolefins: Synthesis, Characterization and Application as Compatibilizers of Polyolefin-Polar Polymer Blends

**Miloud Bouyahyi**, Lidia Jasinska-Walc, Rob Duchateau

SABIC Technology & Innovation (The Netherlands)

## #5· Determination of the Chemical Composition of Ethylene/Butadiene Copolymers Using FTIR Spectroscopy and Chemometrics

**Olivier Boyron**, C. Boisson, M. Taam, J. Thuilliez

University of Lyon (France)

## #6· Molecular Dynamics Simulation of Ethylene/Hexene Copolymer Adsorption onto Graphene: New Insight into Thermal Gradient Interaction Chromatography

**Olivier Boyron**, F. Brunel, C. Boisson

University of Lyon (France)

## #7· Crystalline Morphology Evaluation of Homopolymer Polypropylene with Different Nucleating Agents by AFM

**Gabriela Fagundes Correia**, Andressa Argani Abreu, Mariele Kaipers Stocker

Braskem (Brazil)

## #8· Studies on the use of Filter-Based IR Detector for Short-Chain Branching Characterization of Polyolefin Copolymers with HT-SEC

**Tiny Frijns-Bruls**<sup>1</sup>, Alberto Ortin<sup>2</sup>, Jos Weusten<sup>1</sup>, Erik Geladé<sup>1</sup>

<sup>1</sup>DSM Materials Science Center (The Netherlands), <sup>2</sup>Polymer Char (Spain)

## #9· Evaluation of the Effect of Incorporation of 1-Butene and 1-Hexene Comonomers into LLDPE Resins

**Regina Funck Nonemacher**<sup>1</sup>, Ruth Campomanes Santana<sup>2</sup>, Griselda Barrera Galland<sup>2</sup>, Antonio Marchi Netto<sup>1</sup>

<sup>1</sup>Braskem (Brazil), <sup>2</sup>Universidade Federal do Rio Grande do Sul (Brazil)

**#10· Understanding the Effect of Progressive Addition of Peroxide on the Microstructure and Morphology of ICP Polymers**

**Adriane Gomes Simanke**, Manoela Cangussú, Laura Nyland, Tadeu Mezacasa Forest, Moises Magalhães Werlang, Regina Funck Nonemacher  
*Braskem (Brazil)*

**#11· Filtration of Polymer Solutions and Carbon Black Removal Prior to a GPC Analysis**

**Tonica González**, Benjamín Monrabal, Esther López, Alfredo Roig  
*Polymer Char (Spain)*

**#12· Characterization of Ethylene Vinyl Acetate Copolymers by Chemical Composition Distribution and Molar Mass Distribution Techniques**

**Tonica González**, Esther López, Benjamín Monrabal  
*Polymer Char (Spain)*

**#13· Quantitative Evaluation of <sup>13</sup>C NMR Peak Intensity for Polyolefin Solution (II)**

**Tomohiro Ichikawa**, Mitsuhiko Onda, Hiroko Sato  
*Mitsui Chemical Analysis & Consulting Service Inc. (Japan)*

**#14· The Effect of Post-reactor Extrusion on the Microstructure and Processability of Two Bimodal HDPE: A Real Case**

**Jorge Jardim da Silva**, Manoela Cangussú, Laura Nyland, Bruna Naidon Coelho, Edmindo Ferreira Barros Filho  
*Braskem (Brazil)*

**#15· Is Crystex-QC an Alternative for the Characterization of Amorphous and Crystalline Fractions in Ethylene-Propylene Copolymers?**

**Ljiljana Jeremic**, Andreas Albrecht, Martina Sandholzer  
*Borealis Polyolefine (Austria)*

**#16· Characterization of Seletive Crosslinked Blend of Polyehylene and a Polar Polymer**

**Mariele Kaipers Stocker**, Regina Funck Nonemacher, Bárbara Mano  
*Braskem (Brazil)*

**#17· Simultaneous Deconvolution of Molecular Weight Distribution and Chemical Composition Distribution of Ethylene/1-Olefin Copolymers Using Genetic Algorithm**

**Kett Khayanying**, Rungroj Sakulnaeramit, Siripon Anantawaraskul  
*Kasetsart University (Thailand)*

**#18· Rheo-Optical Raman Studies Of Microscopic Deformation Behaviors of Polyethylene Solids with Various Molecular Weight Distribution under Uniaxial Stretching**

**Takumitsu Kida**, Yusuke Hiejima, Koh-hei Nitta  
*Kanazawa University (Japan)*

**#19· Liquid Chromatography with Porous Graphitic Carbon as Stationary Phase for the Characterization of Stabilizers**

**David Kot**, Nico Apel, Tibor Macko, Jan-Hendrik Arndt, Robert Brüll  
*Fraunhofer Institute, LBF (Germany)*

**#20·The analysis of Ultra-High Molecular Weight Polyethylene (UHMWPE) and Bimodal High Density Polyethylene (HDPE) by Gel Permeation Chromatography in a Quality Control Environment**

**Esther López**, Alberto Ortín, Benjamín Monrabal

*Polymer Char (Spain)*

**#21· Chain Microstructure and Performance of Polypropylene Granules Used for Upright Infusion Bags**

**Beibei Ma**<sup>1</sup>, Chunxia Luo<sup>1</sup>, Honghong Huang<sup>1</sup>, Meifang Guo<sup>1</sup>, Juan Li<sup>1</sup>, Dong Wei<sup>1</sup>, Wallace Yau<sup>2</sup>

<sup>1</sup> SINOPEC, Beijing Research Institute of Chemical Industry (China), <sup>2</sup> Polymer Characterization Consultant (USA)

**#22· Temperature Gradient Interactive Chromatography of Polyethylene with and without Long Chain Branching**

**Tibor Macko**, Jan-Hendrik Arndt, Robert Brüll

*Fraunhofer Institute, LBF (Germany)*

**#23· Relating Analytical Data to Other Company Data to Develop New and Improved Products**

**John F. MacGregor**, Brandon Corbett, Marlene Cardin

*ProSensus, Inc. (Canada)*

**#24· The use of Carbon-13 CP/MAS NMR, FT-IR and SSA to Trace the Effect of Controlled Vis-Breaking on Chain Conformation and Stereoregularity of Heterophasic Ethylene-Propylene Copolymers (HEPCs)**

**Sifiso Innocent Magagula**, Albert J. van Reenen

*Stellenbosch University (South Africa)*

**#25· Determining the Tacticity Distribution of Polyoctenes by Hyphenating 2D-LC (SECxLAC) and NMR**

**Frank Malz**<sup>1</sup>, Karsten Rode<sup>1</sup>, Tibor Macko<sup>1</sup>, Robert Brüll<sup>1</sup>, Youlu Yu<sup>2</sup>

<sup>1</sup>Fraunhofer Institute, LBF (Germany), <sup>2</sup>Chevron Phillips Chemical Company LP (USA)

**#26· Thermal-Gradient NMR of EPDM: A Way to Learn about the Mechanism of Separation of Hypercarb columns?!**

**Frank Malz**<sup>1</sup>, Robert Brüll<sup>1</sup>, Zhe Zhou<sup>2</sup>, Rongjuan Cong<sup>2</sup>, Dibyaranjan Mekap<sup>3</sup>, Willem deGroot<sup>2</sup>

<sup>1</sup>Fraunhofer Institute, LBF (Germany), <sup>2</sup>The Dow Chemical Company (USA), <sup>3</sup>The Netherlands

**#27· Crystallisation Behavior of Commercial Polyethylenes and their Blends**

**Megan Matthews**, Albert van Reenen

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**#28· Determination of LDPE Content in LDPE/LLDPE Blends via <sup>13</sup>C NMR Method**

**Masud M. Monwar**, Youlu Yu

*Chevron Phillips Chemical Company (USA)*

**#29· Retention of Polypropylene Stereoisomers on Porous Graphitic Carbon as Influenced by Column Temperature and Type of Adsorption Promoting Solvent**

**Anthony Ndiripo**, Harald Pasch

*Stellenbosch University (South Africa)*

**#30· Separation According to Polarity of Poly(ethylene-co-acrylic acid) and Poly(ethylene-co-vinyl acetate) Copolymer Components on a Preparative and Chromatographic Scale**

**Anthony Ndiripo**<sup>1</sup>, M. Pornwilard<sup>2</sup>, Thippaya Pathaweeisariyakul<sup>2</sup>, Harald Pasch<sup>1</sup>

<sup>1</sup> Stellenbosch University (South Africa), <sup>2</sup> SCG Chemicals (Thailand)

**#31· Assessing the Cocrystallization on Blends of Ethylene 1-Octene Copolymers by CRYSTAF**

**Laura Santoja-Blasco**, Benjamín Monrabal

*Polymer Char (Spain)*

**#32· Thermal Transition in Cracking Propagation Toughness in Pressurized Pipe HDPE Grades**

**Marcos Roberto Paulino Bueno**, Fernando Silveira, Fernando Castiglia Franceschini

*Braskem (Brazil)*

**#33· The value of preparative Molar Mass Fractionation for Polyolefins**

**Joep Vanderfeesten**, Rajesh Chitta, Gertie Wullms, Claudiu Melian

*SABIC (The Netherlands)*

**#34· Influence of Longest Ethylene and Isotactic Propylene Sequences on Crystallization Elution Fractionation of Ethylene/Propylene Copolymers with Full Compositional Range**

**Voradon Voraruth**<sup>1</sup>, Siripon Anantawaraskul<sup>1</sup>, Saeid Mehdiabadi<sup>2</sup>, João B. P. Soares<sup>2</sup>

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**#35· Study of the Surface Morphologies of Polyethylene Blown Films by White Light Interferometry and their Relationship to the Surface Haze**

**Xuerong Yao**, Cui Zheng, Minqiao Ren, Yujing Tang

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