



# ANTEC<sup>®</sup> ORLANDO

The Plastics Technology Conference

May 7-10, 2018 • Orange County Convention Center • Orlando, FL @



## Wednesday Morning

8:00 am - 11:30 am

8:00 am - 8:30 am

8:30 am - 9:00 am

9:00 am - 9:30 am

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11:00 am - 11:30 am

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9:00 am - 9:30 am

### **W1-Alloys and Blends: Morphology, Compatibilization and Performance of Polymer Blends(Moderator: Rubinder Kaur Lakhman)-Room S320D**

Semiconductive LLDPE Power Cable Insulation Shield

Jason Zhang, Lead Engineer , General Cable

Structure-property Relationships of Microporous Membranes Produced by Biaxial Orientation of Compatibilized PP/Nylon 6 Blends

Jingxing Feng, Ph.D Student, Case Western Reserve University

Investigation of Droplet Behavior Under Real Mixing Conditions

Oguz Celik, Research Assistant, Institut für Kunststofftechnik – University of Stuttgart

Influence of processing and formulation on the properties of PP-PET-blends

Christoph Burgstaller, Managing Director and Head of R&D, TCKT

Nylon 12/PMMA/San Alloys for Translucent Medical Catheters

Timothy Largier, Thermoplastic Development Chemist, Foster Corporation

Design of Extensional Flow Static Mixers for Blending of Ternary Nanoparticle-Polymer-Polymer Blends

Rakesh Gupta, Berry Professor and Chair of Chemical Engineering, West Virginia University

*KEYNOTE:Bio-polymer Alloys and Blends: Past, Present and Future*

Roger Avakian, Fellow, PolyOne

### **W2-Automotive: Materials Development(Moderator: Matt Carroll)-Room S320E**

Innovations in Automotive Plastics "Materials and Processes"

Suresh Shah, Delphi -Retired

Reflections on Evolution and Growth of TPOs.

Mark Barrera, Senior Project Engineer, Asahi Kasei Plastics NA, Inc.

Low Birefringent Cellulose Acetate Propionates for Plastic Display Lens Covers

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| 9:30 am - 10:00 am  | Laura Weaver, Plastics Application Development, Eastman Chemical  |
| 10:00 am - 10:30 am | Introduction to the usage of thermally conductive compounds in automotive lighting<br>Paula Kruger, Application Development Engineer, DSM   |
| 10:30 am - 11:00 am | New resin for liquid cooled modules in electric vehicle battery packs (EVBPs)<br>Rudy Gorny, Senior Principal Scientist, Covestro LLC   |
| 11:00 am - 11:30 am | Improving long term corrosion resistance in electronic applications<br>Josh McIlvaine, Manager, Automotive Electronics Business, DuPont   |
| 8:00 am - 11:30 am  | Advances in Hydrolysis resistance PBT resins for electronic applications including connectors and HEV components<br>Dave Spritzer, DuPont   |
| 8:00 am - 8:30 am   | <b>W3-Bioplastics: Processing, Blends and Composites(Moderator: Margaret Sobkowicz-Kline)-Room S320A</b><br>PHYSICAL FOAMING USING HIGH PRESSURE GAS SATURATION FOR BIOPOLYMER APPLICATIONS.<br>Juan Fernando Campuzano Vallejo, Mechanical Engineer, ICIPC (Instituto de Capacitación e Investigación del Plástico y del Caucho) |
| 8:30 am - 9:00 am   | STUDY OF BIOCOMPATIBILIZER FOR NEW RENEWABLE BLENDS OF POLYPROPYLENE CARBONATE AND POLYBUTYLENE SUCCINATE<br>Barbara Calderon, Umass Lowell   |
| 9:00 am - 9:30 am   | Mechanical Properties and Effects of Microfibrillation of 100 % Biomass Sisal-PLA Composite<br>Hiroyuki Nishimura, Kyoto Institute of Technology  |
| 9:30 am - 10:00 am  | Synthesis of high hardness polyester resin for powder coatings<br>JUNSEOP IM, SAMYANG CORPORATION   |
| 10:00 am - 10:30 am | EFFECTS OF MOLDING CONDITIONS ON MECHANICAL BEHAVIOR OF DIRECT INJECTION MOLDED PLA/WOOD-FIBER COMPOSITES<br>Gangjian Guo, Bradley University   |
| 10:30 am - 11:00 am | Hierarchical Micro/Nanostructures of Poly (lactic acid) Scaffolds for Medical Applications<br>Shujie Yan, Visiting Student, University of Wisconsin-Madison   |
| 11:00 am - 11:30 am | WHEAT PROTEIN AS A PARTICIPANT IN THE SULFUR-CURING OF ISOPRENE RUBBER<br>Barbara DeButts, Virginia Tech  |
| 8:00 am - 10:30 am  | <b>W4-Blow Molding(Moderator: Ken Carter)-Room S320H</b>  |
| 8:00 am - 8:30 am   | DEVELOPMENT OF A RAPID THERMAL CYCLING BLOW MOLDING TECHNOLOGY AND MOLD HEATING SYSTEM OPTIMIZATION<br>Cheng-Long Xiao, University of South China   |
| 8:30 am - 9:00 am   | Simulative preform optimization for improved toplevel behavior of PET-bottles manufactured in the two stage stretch blow molding process<br>Benjamin Twardowski, Research Associate , IKV Aachen  |
| 9:00 am - 9:30 am   | PET Advancements in Extrusion Blow Molding  |

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| 9:30 am - 10:00 am  | Scott Steele, SWS Consulting, LLC<br>A SIMULATION FRAMEWORK FOR BLOW-MOLDING: A PRELIMINARY CASE STUDY ON INJECTION STRETCH BLOW MOLDING FOR BULB COVERS<br>Raghavendra Janiwarad, SABIC |
| 10:00 am - 10:30 am | NUMERICAL SIMULATION OF SHRINKAGE AND WARPAGE DEFORMATION OF AN INTERMITTENT-EXTRUSION BLOW MOLDED PART: VALIDATION CASE STUDY<br>Zohir Benrabah, National Research Council Canada       |
| 8:00 am - 11:30 am  | <b>W5-Engineering Properties and Structure: Polymer Physical Properties II(Moderators: Gerry Billovits and Paul Hans)-Room S320B</b>   |
| 8:00 am - 8:30 am   | Foam Structure and Thermal Comfort in Polyurethane Mattress Foams<br>Douglas Brune, The Dow Chemical Company   |
| 8:30 am - 9:00 am   | PREDICTION OF FIBER REINFORCED PLASTICS CONSIDERING LOCAL FIBER LENGTH AND ORIENTATION<br>Fabian Willems, Institut für Kunststofftechnik   |
| 9:00 am - 9:30 am   | Practical Simulation of Liquid Crystal Polymer Directionality During Processing<br>Anthony Sullivan, Tufts University  |
| 9:30 am - 10:00 am  | Crystallization mechanism of Polyvinylidene Fluoride via non-isothermal crystallization and supercritical CO <sub>2</sub> processing<br>Ji Eun Lee, York University                      |
| 10:00 am - 10:30 am | Macromolecular Spectroscopy for Determining Mechanical Properties of Polydimethylsiloxane (PDMS)<br>Ahmed Anwer, University of Toronto   |
| 10:30 am - 11:00 am | FLOW PROBLEMS THAT COULD ARISE FROM ADDING BIOMASS MATERIALS TO PLASTICS<br>Carrie Hartford, Senior Project Engineer, Jenike & Johanson  |
| 11:00 am - 11:30 am | ROTOMOLDING PROCESSES FOR POLY(ARYL KETONES) AND OTHER HIGH TEMPERATURE POLYMERS<br>Manuel Garcia-Leiner, Exponent   |
| 8:00 am - 11:30 am  | <b>W6-Extrusion: General(Moderator: Kevin Laux)-Room S320F</b>   |
| 8:00 am - 8:30 am   | FURTHER IMPROVEMENTS IN PROCESSING OF SEMI-CRYSTALLINE AND AMORPHOUS POLYMERS FOR THERMOFORMING SHEET IN MULTIPLE NIP SYSTEMS<br>Peter Rieg, battenfeld-cincinnati                       |
| 8:30 am - 9:00 am   | EFFECT OF DIE EXIT STRESS STATE, DEBORAH NUMBER AND EXTENSIONAL RHEOLOGY ON NECK-IN PHENOMENON<br>Martin Zatloukal, Research Professor, Tomas Bata University in Zlin                    |
| 9:00 am - 9:30 am   | MICRO-LAYERED TUBING AND PIPES VIA MULTI-LAYER CO-EXTRUSION<br>Tyler Schneider, Case Western Reserve University  |
| 9:30 am - 10:00 am  | ROLE OF INTERFACIAL CRYSTALLIZATION IN DESIGNING POLYOLEFIN BLENDS FROM MIXED STREAM RECYCLE FEEDS   |

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| 10:00 am - 10:30 am | Alex Jordan, University of Minnesota<br>EVALUATION OF THERMOPLASTIC POLYURETHANE (TPU) RESINS AS POSSIBLE<br>SUBSTITUTES OF CURRENT RESINS FOR ESCALATOR HANDRAILS  |
| 10:30 am - 11:00 am | Qingping Guo, EHC Canada<br>PRELIMINARY STUDY OF BIREFRINGENCE DISTRIBUTION IN BLOWN FILM   |
| 11:00 am - 11:30 am | Jin Wang, The Dow Chemical Company<br>ENERGY GAP METHOD (EGM) APPLIED TO IMPROVE EXTRUSION ENERGY<br>PERFORMANCE: SUCCESSFUL CASE STUDIES   |
| 8:00 am - 11:30 am  | Juan Carlos Ortiz Pimienta, ICIPC-Instituto de Capacitación e Investigación del Plástico y<br>del Caucho<br><b>W7-Thermoplastic Materials and Foams: Frontiers(Moderator: Maxwell<br/>Wingert)-Room S320G</b> |
| 8:00 am - 9:00 am   | Thermoplastic Foam; 1930-2020<br>Shau-Tarnng Lee  |
| 9:00 am - 9:30 am   | Auxetic Foam Sensor with Silver Nanowire<br>Md Faisal Ahmed, Florida State University   |
| 9:30 am - 10:00 am  | Poly(Vinylidene Fluoride)/ Graphene Nanoplatelets Composites with Microcellular<br>Structure to Enhance Electromagnetic Shielding Properties  |
| 10:00 am - 10:30 am | Biao Zhao, University of Toronto<br>ENHANCING ELECTROMAGNETIC SHIELDING PERFORMANCE OF PVDF/MWCNT<br>COMPOSITES THROUGH FOAMING   |
| 10:30 am - 11:00 am | Chenyinxia Zuo, Student, University of Toronto<br>Piezoelectric Foams with High Thermal Stability and Flexibility   |
| 11:00 am - 11:30 am | Zhe Liu, Florida State University<br>Resorcinol Formaldehyde Aerogel Nano-network Structural Assembly and its Thermal<br>Properties Correlation   |
| 8:00 am - 12:00 pm  | Mohammed Alshrah, University of Toronto<br><b>W8-Technical Marketing: Additives(Moderator: Joe Golba)-Room S320C</b>  |
| 8:00 am - 8:30 am   | A novel synergist for halogen free flame retardants<br>Amit Paul, Paxymex   |
| 8:30 am - 9:00 am   | New technology for improving halogen free flame retardant performance in polymer<br>application   |
| 9:00 am - 9:30 am   | Ido Offenbach, Evonik<br>New Generation Flame Retardants Based on Ionic Liquids   |
| 9:30 am - 10:00 am  | Yanjie "Jeff" Xu, Founder, Inovia Materials LLC<br>Novel Approach to Controlled Migration of Antifog Additives in Multilayer Packaging Films  |
| 10:00 am - 10:30 am | Michal Schreiber, Product Manager, Packaging Application, Tosaf<br>Novel Dispersants Enabled by Natural Oil Metathesis  |
| 10:30 am - 11:00 am | Frederyk Ngantung, Elevance Renewable Sciences<br>Advances in Thermal Stability   |

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| 11:00 am - 11:30 am | Bradley Sparks, Ascend Performance Materials<br>TUBALL™ SINGLE WALL CARBON NANOTUBES FOR THERMOPLASTICS  |
| 11:30 am - 12:00 pm | Maus Christian, Product Development Leader, OCSIAL<br>Surface Enhancement via Polypropylene Metallic Compounds<br>Tanmay Pathak, R&D Engineer, A. Schulman               |
| 8:00 am - 10:00 am  | <b>W9-Flexible Packaging: Film Sealing and Barrier(Moderator: Lora Liang)-Room S322</b>  |
| 8:00 am - 8:30 am   | <i>KEYNOTE-Rethinking Machine Direction Sealing</i><br>Michael Pilolli, D.R. Joseph, Inc.  |
| 8:30 am - 9:00 am   | <i>KEYNOTE:Heat Transfer Modelling in Multilayer Films used for Flexible Packaging</i><br>Dan Ward, Technical Service Specialist, NOVA Chemicals                         |
| 9:00 am - 9:30 am   | Thermo-Rheological Modeling and Simulation of Heat Sealing Process for Multi-Layer Flexible Packaging Applications<br>Vinod Kumar Konaganti, NOVA Chemicals Coroporation |
| 9:30 am - 10:00 am  | Barrier Materials Having Layer-Like Morphology for Packaging Use:Extruded Film and Oriented Film<br>Guojun Zhang, A. Schulman inc  |
| 10:00 am - 11:30 am | <b>W10-Thermoplastics Elastomers(Moderator: Mukul Kaushik)-Room S322</b>   |
| 10:00 am - 10:30 am | KEYNOTE: SHIFTING MARKETPLACE DYNAMICS AND POSITIONING TPEs FOR FUTURE PROFITABILITY,DIVERSIFICATION AND GROWTH<br>Robert Eller, President, Robert Eller Associates LLC  |
| 10:30 am - 11:00 am | ELASTIC RECOVERY AND ACTUATION IN POLYOLEFIN THERMOPLASTIC ELASTOMERS<br>Barbara DeButts, Virginia Tech  |
| 11:00 am - 11:30 am | From Recycled Tires to Plastic Parts: Micronized Recycled Rubbers in Thermoplasitc Polyolefins<br>Haikun Xu, R&D, Entech, Inc  |