



8:00 am - 11:00 am

8:00 am - 8:30 am

8:30 am - 9:30 am

9:30 am - 10:00 am

Extrusion- Tutorials I

JW Grand Ballroom 7

Moderator: Adam Dreiblatt

Specification of Twin Screw Extruders

Adam Dreiblatt, Director of Process Technology, CPM Century Extrusion
Melting Mechanisms: Single vs. Co-rotating Twin-screw Extruders

Gregory Campbell, Castle Associates

Paul Andersen, Coperion

SPECIFIC MECHANICAL ENERGY AS A PARAMETER FOR CORRELATING
PROCESS CHARACTERISTICS AND MATERIAL RESPONSE IN MELT

COMPOUNDING AND REACTIVE EXTRUSION OPERATIONS

10:00 am - 10:30 am	Joe Golba, Lead Scientist - Reactive Extrusion, PolyOne Corporation Model-Based Inferential Sensing of Melt Flow Rate In Polymer Compounding Operations
10:30 am - 11:00 am	Costas Tzoganakis, Professor, University of Waterloo Applying Ludovic 1D Twin Screw Extrusion Simulation for the Analysis and Scale-Up of Melt Compounding and Reactive Extrusion Processes
8:00 am - 11:00 am	Jane Spikowski, Senior R&D Engineer, PolyOne Corporation Extrusion- Tutorials II JW Grand Ballroom 8
8:00 am - 8:30 am	A SHORT REVIEW OF RHEOLOGY PRINCIPLES OF MOLTEN POLYMERS FOR EXTRUSION APPLICATIONS
8:30 am - 9:00 am	Olivier Catherine, Technical Director, Cloeren A New Software for Optimization of Extrusion Dies
9:00 am - 9:30 am	Mahesh Gupta, Michigan Tech University Understanding Materials and Equipment as a Film Processor
9:30 am - 10:00 am	Karen Xiao, Celgard, LLC Compounding Process 3D Simulation Tutorial
10:00 am - 10:30 am	Philippe david, General Manager, SCC Fundamental of Single Screw Extruders
10:30 am - 11:00 am	Hassan Eslami, Macro Engineering and Technology Trouble shooting Multilayer coextrusion systems
8:30 am - 10:30 am	Eldridge Mount III New Technology Forum- Macromolecules in Medical and Healthcare Applications White River C/D Moderator: Len Czuba
8:30 am - 9:00 am	The Future of Plastics in Orthopedics
9:00 am - 9:30 am	Jordan Freedman, Research Manager - Biomaterials, Zimmer Biomet, Inc. The Development of an Artificial Meniscus Using Medical Grade Plastics
9:30 am - 10:00 am	Jack Farr, Vice President, Clinical and Regulatory Affairs, Active Implants The Red Queen: Antimicrobial Challenges in Medical Devices

10:00 am - 10:30 am	Peter Gabrielle, Vice President, Research and Development, Secant Medical Novel Applications of Polymers for Medical and Pharmaceutical Product Concept
8:30 am - 11:30 am	Vipul Dave, Enterprise Resin Director & Fellow, Plastics Category, Medical Device Supply Chain, Johnson & Johnson Alloys and Blends- Design, Performance and Characterization of Advanced Engineering Blends Room 305/306 Moderator: Rubinder Kaur Lakhman
8:30 am - 9:00 am	Comparative Analysis of Low-Smoke, Zero-Halogen Compounds for Wire and Cable Applications
9:00 am - 9:30 am	Jon Malinoski, General Cable INFLUENCE OF FILLER DISPERSION ON ELECTRICAL AND RHEOLOGICAL PROPERTIES OF PC/SAN BLENDS WITH GRAPHITE NANOPATES OR EXPANDED GRAPHITE
9:30 am - 10:00 am	Petra Potschke, IPF Dresden FIRE SURVIVAL CABLE: UNDERSTANDING OF LAB SCALE TO MANUFACTURING SCALE CABLE VALIDATION
10:00 am - 10:30 am	Sathish Kumar Ranganathan, Lead Engineer, General Cable The Surface Resistance Value and Physical Properties of Conductivity Fiber Filler-compounded PES OPTIMIZATION OF MECHANICAL PERFORMANCE AND MISCIBILITY OF RECYCLED PET AND PC BLENDS BY VENTED INJECTION MOLDING
10:30 am - 11:00 am	Supaphorn Thumsorn, Researcher, Kyoto Institute of Technology EFFECTS OF REACTIVE POLYMER AS MODIFIER ON IMPACT STRENGTH AND HYDROLYTIC STABILITY OF PC/ABS BLEND
11:00 am - 11:30 am	Kohhei Nishino, Denka Company Limited The Surface Resistance Value and Physical Properties of Conductivity Fiber Filler-compounded PES
9:00 am - 11:00 am	Hiroyuki Hamada, Professor, Kyoto Institute of Technology Applied Rheology-Assessing Processibility II Room 309/310
9:00 am - 9:30 am	Study on Extrudate Swell of High-Density Polyethylenes in Slit (Flat) dies
9:30 am - 10:00 am	Vinod Kumar Konaganti, University of British Columbia THERMAL AND TIME-DEPENDENT RHEOLOGICAL STABILITY BEHAVIOR OF

POLYACRYLONITRILE WITH VARIOUS PLASTICIZERS

10:00 am - 10:30 am	Jianger Yu, Virginia Tech Determination of the Geometrical and Non-newtonian Correction Factors for the Calculation of Viscosity Function Using Screw Rheometers Applying the Self-consistent Method
10:30 am - 11:00 am	Myung-Ho Kim Non-Traditional uses for a capillary rheometer
8:30 am - 12:30 pm	Tim Haake, General Manager, Goettfert Injection Molding- Troubleshooting & Processing White River A Moderator: David Okonski
8:30 am - 9:00 am	TROUBLESHOOTING AND APPROPRIATE MAINTENANCE IN INJECTION MOLDING
9:00 am - 9:30 am	Kenny Saul, Managing Director, SHS plus GmbH Weld lines in injection molded parts - strength, morphology and improvement
9:30 am - 10:00 am	Ines Kuehnert, Leibniz-Institut fuer Polymerforschung Dresden e.V. Trouble Shooting Hot Tip Induced Polycarbonate Splay
10:00 am - 10:30 am	Jeremy Dworshak, Steinwall The Melt Temperature Variation in the Barrel of Injection Molding Machine
10:30 am - 11:00 am	JooHyeong Jeon, Ajou University Design Optimization of the Layout of the Heating/Cooling Pipes of Rapid Heat Cycle Molding
11:00 am - 11:30 am	Yanjin Guan, Shandong University EFFECT OF GAS COUNTER PRESSURE(GCP) ON SHRINKAGE AND RESIDUAL STRESS
11:30 am - 12:00 pm	Wen-Ren Jong, Department of Mechanical Engineering, Chung Yuan Christian University Development of an Inline Plasma Treatment during Injection Molding Process
12:00 pm - 12:30 pm	Timo Nordmeyer, University of Paderborn MICROINJECTION MOLDING: INFLUENCE OF MOLDING PARAMETERS ON THE ELECTRICAL CONDUCTIVITY OF POLYPROPYLENE FILLED WITH MULTI-WALLED CARBON NANOTUBES
	Shengtai Zhou, University of Western Ontario

8:30 am - 11:00am

Injection Molding: Simulation 3

White River B

Moderator: Lynzie Nebel

8:30 am - 9:00 am

TWO-SHOT OVERMOLDING COOLING SIMULATION

Lu Chen, Autodesk

9:00 am - 9:30 am

Validation of Numerical approach and experiment in Metal Powder Molding by Using Injection Compression Technology

9:30 am - 10:00 am

Kuan-Hua Lee, Chung Yuan Christian University

SIGMASOFT® Virtual Molding: A New Approach to Resin Selection

10:00 am - 10:30 am

Gabriel Geyne, SIGMASOFT Virtual Molding

NUMERICAL SIMULATION FOR INSERT INJECTION MOLDING OF ONE-CONSTITUENT POLYPROPYLENE SINGLE-POLYMER COMPOSITES

10:30 am - 11:00 am

Nannan Jiang, Beijing Institute of Technology

ACCURATE THREE DIMENSIONAL COOLING SIMULATION OF THE GAS-ASSISTED PLASTIC INJECTION MOLDING PROCESS

8:00 am - 11:30 am

Clinton Kietzmann, Autodesk Australia

Plastics in Building and Construction Session

White River H

Moderator: Mahesh Narkhede

8:00 am - 9:00 am

Keynote - Novel Applications of Polymer Composites for Navigational Structures

9:00 am - 9:30 am

Hota GangaRao, West Virginia University

POLYSTYRENE FOAM INSULATION: IMPLEMENTATION OF ALTERNATE SUSTAINABLE FLAME RETARDANT

9:30 am - 10:00 am

Shari Kram, Dow Chemical Co.

IONOMERS AS SMART VAPOR BARRIERS FOR BUILDING APPLICATIONS

10:00 am - 10:30 am

John Bishop, DuPont

ADVANCES IN STRUCTURAL ADHESIVES FOR BUILDING AND CONSTRUCTION APPLICATIONS

10:30 am - 11:00 am

Matt Kalinowski, Dow Chemical

Impact Modeling of Single-Ply TPO Roofing Systems

11:00 am - 11:30 am

Tianyi Luo, Lehigh University

Flexible Acrylic Resin Technology

8:00 am - 11:00 am	Hailan Guo, Research Scientist , Dow Chemical Company Composites- NDI and Processing
8:00 am - 9:00 am	White River G Moderator: Ray Boeman Recent Efforts on the Use of Focused Ultrasound to Identify Lamina/Laminate Information for Carbon Fiber Reinforced Laminated Composites
9:00 am - 9:30 am	David Jack NON-DESTRUCTIVE TESTING OF COMPOSITES BY ROBOT SUPPORTED AIR-COUPLED ULTRASOUND
9:30 am - 10:00 am	Yannick Bernhardt, University of Stuttgart, Germany NON-DESTRUCTIVE TESTING OF CFR-TAPES WITH THERMOPLASTIC MATRIX USING AIR-COUPLED ULTRASOUND
10:00 am - 10:30 am	Morphology and strength of die-drawn porous sheets from filled polypropylenes
10:30 am -11:00 am	Krishnamurthy Jayaraman, Professor, Michigan State University IMPROVING ADHESION BETWEEN KEVLAR®129 FIBERS AND NATURAL RUBBER MATRIX USING MORPHOLOGICAL TREATMENTS AND COUPLING AGENTS
8:30 am - 11:30 am	Nihal Kanbargi, University of Massachusetts Engineering Properties and Structure: Recycling and Scratch Room 103/104
8:30 am - 9:00 am	Moderator: Steve Driscoll Moderator: Luyi Sun Probing the Assembly, Conformation, and Thermodynamics of Thermoresponsive Poly(N-isopropylacrylamide) (PNIPAM) by Small-Angle Neutron Scattering
9:00 am - 9:30 am	Michael J. A. Hore, Assistant Professor, Case Western Reserve University Quantification of Branching and Network Structure
9:30 am - 10:00 am	Gregory Beaucage, University of Cincinnati Comparison of Non-Isothermal Crystallization Kinetics for Semi-Linear and Linear Polyphenylene Sulfide (PPS) and Effect on Simulated Crystallinity Gradient
10:00 am - 10:30 am	Jayson Humble, A. Schulman Use of Conductive AFM for Composites of PP Modified with Carbon Nanofillers
10:30 am - 11:00 am	Vicki Flaris, Bronx Community College RUBBER TOUGHENED POLYLACTIDE (PLA) VIA CATALYZED EPOXY-ACID

INTERFACIAL REACTION

- 11:00 am - 11:30 am
Christopher Thurber, Senior Engineer, Dow Chemical Company
Effect of anhydride type on structure and thermal properties of poly(propylene carbonate) composites produced by reactive extrusion
- 8:00 am - 11:30 am
Guo Jiang, South China University of Technology
Thermoplastic Materials and Foams- Foaming Fundamentals and Processes
White River J
Moderator: Arron Guan
- 8:00 am - 8:30 am
Determination of CO₂ Solubility and Volume Swelling in PMMA in Light of Retrograde Vitirification
No location
- 8:30 am - 9:00 am
Syed Mahmood, Ph.D Student, University of Toronto
Critical Parameters of Generating PMMA Nanocellular Foam
- 9:00 am - 9:30 am
Shu-Kai Yeh, Assistant Professor, National Taiwan University of Science and Technology
ENHANCED PROPERTIES OF ORIENTED MULTILAYER POLYPROPYLENE FILM/FOAMS
- 9:30 am - 10:00 am
Andy Olah, Case Western Reserve University
EXTRUSION FOAMING OF LLDPE/WOOD FIBER COMPOSITES
- 10:00 am - 10:30 am
Gangjian Guo, Bradley University
APPLICATION OF AIR GAP TO ENHANCE ACOUSTIC PERFORMANCE OF BIO-BASED PLA FOAMS
- 10:30 am - 11:00 am
Shahrzad Ghaffari, University of Toronto
DYNAMIC SOLUBILITY OF CARBON DIOXIDE IN POLYPROPYLENE MELT
- 11:00 am - 11:30 am
Alireza Tabatabaei, Ph.D Student, University of Toronto
MODELING OF THE FIBER ORIENTATION IN POLYMER/FIBER COMPOSITE FOAMS
- 8:00 am - 10:00 am
Vahid Shaayegan, University of Toronto
Polymer Analysis Session: Spectroscopy
Room 302/303
Moderator: Joel Lischefski
- 8:00 am - 8:30 am
Determination of the compositions of fully biodegradable ternary blends with near-infrared spectroscopy
- 8:30 am - 9:00 am
Ruhuang Chen, South China University of Technology
RAPID SPECTRAL MEASUREMENT OF THE MECHANICAL PROPERTIES OF

POLYPROPYLENE RECOVERED FROM SHREDDED END-OF-LIFE VEHICLES

9:00 am - 9:30 am

Brian Riise, Director of Research and Development, MBA Polymers Inc.
Molecular weight analysis of polyethylenimine using dynamic light scattering and gel permeation chromatography with multi-angle light scattering detector

9:30 am - 10:00 am

Wen-Shiue Young, Dow Chemical
Surface mechanicals and microscopy methodologies for coating characterization

8:30 am - 11:00 am

Subhransu Mohapatra, Lead Scientist, SABIC

Bioplastics Session

White River I

8:30 am - 9:00 am

Production of In Situ Microfibrillar Composites as a Novel Approach Towards Improved Bio-Based Polymeric Products

9:00 am - 9:30 am

Chul Park, Distinguished Professor, University of Toronto
Fabrication and Characterization of Bio-based PCM Microcapsules for Thermal Energy Storage

9:30 am - 10:00 am

Maryam Fashandi, York University

EFFECT OF MINERALS ON RHEOLOGICAL AND THERMAL BEHAVIOR OF PLA/PMMA BLENDS

10:00 am - 10:30 am

Mauricio Gonzalez, Ph.D Student, Université de Sherbrooke

MECHANICAL PROPERTY AND FRACTURE ANALYSIS OF WOOD POWDER/PP COMPOSITE MOLDED BY INJECTION MOLDING

10:30 am - 11:00 am

Zhiyuan Zhang, Researcher, Daiwa Itagami

MODERN FABRICATION OF POLY(LACTIC ACID) NANOFIBERS BY COTTON CANDY METHOD

8:30 am - 11:00 am

Supaphorn Thumsorn, Researcher, Kyoto Institute of Technology

Automotive Division Session I

Room 101

Moderator: Suresh Shah

8:30 am - 9:30 am

Keynote: Recent Plastics Innovative Awards in Automotive Industry

9:30 am - 10:00 am

Suresh Shah, Retired, Delphi

Fabrication of Glass mat Thermoplastic composite by Needling Punching Process

10:00 am - 10:30 am

Yuying Dong, Student, Donghua University

Vehicle Lightweighting and Improved Crashworthiness – Plastic/Metal Hybrid Solutions for

10:30 am - 11:00 am

BIW

Amit Kulkarni, Sr. Manager, Technology & Innovation, Automotive , Sabic
Automotive glazing-Polymeric systems providing enhanced design freedom & functionality

Harindranath Sharma, SABIC