



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 Processability 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

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

Myung-Ho Kim

Non-Traditional uses for a capillary rheometer

Tim Haake, General Manager, Goettfert

Injection Molding- Troubleshooting & Processing

White River A

Moderator: David Okonski

TROUBLESHOOTING AND APPROPRIATE MAINTENANCE IN INJECTION MOLDING

Kenny Saul, Managing Director, SHS plus GmbH

Weld lines in injection molded parts - strength, morphology and improvement

Ines Kuehnert, Leibniz-Institut fuer Polymerforschung Dresden e.V.

Trouble Shooting Hot Tip Induced Polycarbonate Splay

Jeremy Dworshak, Steinwall

The Melt Temperature Variation in the Barrel of Injection Molding Machine

JooHyeong Jeon, Ajou University

Design Optimization of the Layout of the Heating/Cooling Pipes of Rapid Heat Cycle Molding

Yanjin Guan, Shandong University

EFFECT OF GAS COUNTER PRESSURE(GCP) ON SHRINKAGE AND RESIDUAL STRESS

Wen-Ren Jong, Department of Mechanical Engineering, Chung Yuan Christian University

Development of an Inline Plasma Treatment during Injection Molding Process

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

10:00 am - 10:30 am

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Injection Molding: Simulation 3

White River B

Moderator: Lynzie Nebel

TWO-SHOT OVERMOLDING COOLING SIMULATION

Lu Chen, Autodesk

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

Kuan-Hua Lee, Chung Yuan Christian University

SIGMASOFT® Virtual Molding: A New Approach to Resin Selection

Gabriel Geyne, SIGMASOFT Virtual Molding

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

Nannan Jiang, Beijing Institute of Technology

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

Clinton Kietzmann, Autodesk Australia

Plastics in Building and Construction Session

White River H

Moderator: Mahesh Narkhede

Keynote - Novel Applications of Polymer Composites for Navigational Structures

Hota GangaRao, West Virginia University

POLYSTYRENE FOAM INSULATION: IMPLEMENTATION OF ALTERNATE SUSTAINABLE FLAME RETARDANT

Shari Kram, Dow Chemical Co.

IONOMERS AS SMART VAPOR BARRIERS FOR BUILDING APPLICATIONS

John Bishop, DuPont

ADVANCES IN STRUCTURAL ADHESIVES FOR BUILDING AND CONSTRUCTION APPLICATIONS

Matt Kalinowski, Dow Chemical

Impact Modeling of Single-Ply TPO Roofing Systems

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 White River G Moderator: Ray Boeman
8:00 am - 9:00 am	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 Moderator: Steve Driscoll Moderator: Luyi Sun
8:30 am - 9:00 am	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	Chistopher 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 CO ₂ Solubility and Volume Swelling in PMMA in Light of Retrograde Vitirification No location Syed Mahmood, Ph.D Student, University of Toronto Critical Parameters of Generating PMMA Nanocellular Foam
8:30 am - 9:00 am	
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
8:30 am - 9:00 am	White River I 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
8:30 am - 9:30 am	Room 101 Moderator: Suresh Shah 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