

GPEC® 2009 Technical Chair Report

GPEC 2009 Conference Update

Adrian Merrington, Technical Chair

This year's GPEC is starting to take shape. Abstracts have all been assessed and we will have 59 scientific papers presented at this year's conference in three tracks: Recycling, Reclamation and Supply and Bio-based and Biodegradable Materials. Our Plenary speakers will be Eric Connell from Toyota who will discuss *Automotive Applications and Expectations of Bio-Based Materials* and John Christy of Alabama University, co-recipient of the Nobel Peace Prize in 2007, who will present *Climate Change by the Numbers*. We will also have a session organized and presented by the scientists at Battelle as part of the Bio track this year. With this variety of content, I'm sure there are more than a few things to interest all in attending **Plastics: The Wonderful World of Sustainability and Recycling**; SPE's Environmental Division's Global Plastics Environmental Conference 2009 being held in Orlando Florida February 25-27, 2009.



Dr. Adrian Merrington
GPEC® Technical Chair

Info on Our GPEC® 2009 Technical Chair:

Dr. Adrian Merrington is currently a *Senior Associate Scientist* and *Assistant Professor* at the *Michigan Molecular Institute* (MMI). He was born in England, graduated from the *University of Greenwich* with Honours in *Applied Chemistry*, became a *Chartered Chemist* and *Chartered Scientist* through the *Royal Society of Chemistry* and received a Ph.D. in *Chemical Engineering* from the *University of Bradford*. He has been at MMI since 1992 when he joined as a *Visiting Scientist* and *Post-doctoral Fellow*. He is an *Adjunct Professor* with *Central Michigan University*. His work in the areas of *Plastics Recycling*, *Plastics Processing* and *Rheology* has earned him many awards including inclusion into both *Who's Who in Polymers* and *Outstanding Scientists of the 21st Century*. He has been a principal investigator and collaborator on a number of programs, specifically dealing in the areas of *plastics recycling*, *rheology*, *additives*, *colloids* and *particulates*, *fillers*, *composites* and *blends*. He has been and continues to be very active with the *mid-Michigan Section of SPE* having served terms as *President*, *Vice-President*, *Past-President*, *Program Chair*, *House Chair*, *Public Interest Chair*, *Website Editor* and *Director*. He is an *Advocate* with *Habitat for Humanity* and *Head Road Captain* of the local *Harley Owners Group*. He has been happily married to *Randi* for 10 years and they have one wonderful 7-year old son, *Ian*.



We are soliciting Student Posters for GPEC® 2009. Students presenting exceptional posters will receive cash prizes.

Students wishing to have their posters published in the conference program need to submit their name, poster title, and their affiliation to by **December 31, 2007**:

Richard Bopp

Richard_C_Bopp@natureworksllc.com

952-742-0454

or

Gwen Mathis

Gwensmathis@aol.com

800-798-1241



Society of Plastics Engineers, Inc.
Promoting the Scientific and Engineering Knowledge of Plastics

800-798-1241
 706-238-9101

SPE Plastics Environmental Division

P.O. Box 441
 Lindale, GA 30147
www.sperecycling.org

GPEC® 2009 Schedule of Events, February 25 - 27, 2009

Tuesday February 24	Plastics Recycling 2009 Conference
Wednesday February 25	Plastics Recycling 2009 Conference
Wednesday	2/25/09 GPEC 2009 Registration 10:00 AM – 5:00 PM Exhibitor setup 7:30 AM - 3:00 PM: Veracruz A Ballroom PED Board Meeting: Coronado S Room 3:00 - 5:00 pm Connections Reception: Veracruz A Ballroom 6:00 - 7:30 PM
Thursday 7:30 - 8:30 AM	2/26/09 Continental Breakfast: Fiesta 5 <i>Conference Greeting/Opening – GPEC 2009 Chairman, Susan Kozora, IAC</i>
8:30 – 9:00 AM	Speaker and moderator set up
9:00 AM - 5:00 PM	Technical Paper Sessions Recycling / Automotive Tracks, Fiesta 1 – 2 – 3 Reclamation & Supply, Fiesta 7 – 10 Bio-based & Biodegradable Materials, Fiesta 6 Sponsored Presentations, Fiesta 1 – 2 – 3 Clean Technology Business Forum & Competition, Fiesta 1 - 3 (Moderated by Eric Koester)
12:00 – 1:30 PM	Lunch: Fiesta 5, Plenary Luncheon Eric Connell, Toyota
10:00 - 10:25 AM	Break – Tracks 1&2 : Exhibit Floor: Veracruz A Ballroom
10:30-10:55 AM	Break – Track 3 : Exhibit Floor: Veracruz A Ballroom
4:00 - 6:00 PM	Student Poster Displays: Veracruz A Ballroom
7:00 - 9:00 PM	GPEC Awards Dinner: Fiesta 5
Friday 7:30 - 8:30 AM	2/27/09 Continental Breakfast: Fiesta 5 <i>PED Annual Business Meeting – Division Chairman, Susan Kozora, IAC</i>
9:00 – 4:00 PM	Technical Paper Sessions Recycling / Automotive Tracks, Fiesta 1 – 3 Reclamation & Supply, Fiesta 7 – 10 Bio-based & Biodegradable Materials, Fiesta 6 Sponsored Presentations, Fiesta 1 – 2 – 3
12:00 – 1:30 PM	Lunch: Fiesta 5, Plenary Luncheon Dr. John Christy, University of Alabama – Huntsville, Nobel Prize Co-Winner
10:00 - 10:25 AM	Break – Tracks 1&2 : Exhibit Floor: Veracruz A Ballroom
10:30 - 10:55 AM	Break – Track 3 : Exhibit Floor: Veracruz A Ballroom
2:30 – 4:00 PM	Panel Discussion
4:00 PM	Conference Ends

For more information on GPEC® 2009 and the Environmental Division of the Society of Plastics Engineers, please visit:

www.sperecycling.org

Technical Program for GPEC[®] 2009

Plenary Speakers:

Dr. John Christy, University of Alabama: “Climate Change by the Numbers”

Eric J. Connell, Toyota: “Automotive Applications & Expectations of Bio-Based Materials”

Bio-based and Biodegradable Materials

BB1. Quantifying the Biobased Carbon Content within Plastics using ASTM-D6866: A Technical Overview
Darden Hood, Beta Analytic Inc.

BB2. Curaua Fiber Plastic Composites
Jay Amarasekera, SABIC Innovative Plastics

BB3. Synthesis of Bio Based Epoxy and Curing Agent using Rosin and Study of Cure Reactions
Jinwen Zhang, Washington State University

BB4. High Performance Bioplastics – Utilizing Castor Oil as a Renewable Feedstock for Polyamide 11
Todd Rogers, Arkema Inc

BB5. Conversion of Beer Bottoms Waste and Rice Waste to Biodegradable Plastics via Bacterial Transformation
Joseph Greene, California State University

BB6. Impact-Modified PC Blends with Sustainable, Environment-Friendly Polylactide
James Chung, Bayer Material Science LLC.

BB7. Samsung’s Environment-Friendly Materials: Sustainable & Durable
Youngmi Chung, Samsung Cheil Industries, Inc.

BB8. Mirel Biobased, Biodegradable Polyhydroxyalkanoates (PHAs): Renewable Materials for the Growing Bioplastics Marketplace
Kristin Taylor, Telles, Metabolix and ADM JV

BB9. Advances in the Manufacture, Development and Commercialization of Poly Hydroxy Butyrate Valerate (PHBV) Biopolymers
Jim Lunt, Tianan Biologic

BB10. Oxo-Biodegradable Plastics
Michael Stephen, Symphony Environmental Technologies PLC

- BB11. Sustainable Communities Need Sustainable Biomaterials**
Brenda Platt, Institute for Local Self-Reliance
- BB12. Advanced Hybrid Composite Materials Biodegradable Super Absorbent Polymer**
Zvika Meiri, Exotech BioSolutions Ltd.
- BB13. Improvement of Mechanical Properties of Southern Yellow Pine through Impregnation with BORR Resin**
Katerina Sanchez, University of Wisconsin - Madison
- BB14. Novel Bioplastic Blends and Nanocomposite**
John Dorgan, Colorado School of Mines
- BB15. Novel Method to Control the Rheological Properties and Processability for Microbial Poly(3-hydroxybutyrate)**
Masayuki Yamaguchi, Japan Advanced Institute of Science and Technology
- BB16. Characterization of Polystyrene -g- Polylactide Synthesized by Grafting-From Method**
Rathanawan Magaraphan, Chulalongkorn Universtiy

Reclamation & Supply

- RS1. Engineered Recycling Systems for Post-Consumer and Post-Industrial Scrap**
Brian Woodcock, PSI-Polymer Systems
- RS2. Size Reduction Equipment for Reclaim Extrusion**
John Farney, Cumberland Engineering Corporation
- RS3. Automated Optical Sorting of Electronic Scrap – Case Studies from the USA and Europe**
Felix Hottenstein, MSS, Inc.
- RS4. Titanates and Zirconates for Recycled, Compostable and Biobased Polymer Composites**
Sal Monte, Kenrich
- RS5. Screw Optimization for Bio-Based Resins**
Christine Ronaghan, Davis-Standard Converting Systems
- RS6. How to Reclaim Your Bio Resin Scrap**
Bob Harrison, Wittmann, Inc.
- RS7. An Eco-efficiency Life Cycle Analysis of Food Waste Collection and Disposal**
Keith Edwards, BASF Corporation and JF Connolly & Associates
- RS8. Life-Cycle-Analysis of Hot Beverage Cup Technologies: Coated Paper, PS Foam and Expanded Recycled PET**
Tom Malone, National MicroGREEN Polymers Inc

- RS9. An Innovative Equipment Solution to Reclaim Post Industrial and Post Consumer Film That Contains High Levels of Moisture and Printing**
Kevin Slusarz, Davis-Standard, LLC
- RS10. Uses of Recycled Rubber Powder in Thermoplastic Resins as a Feedstock Extender, Impact Modifier, and Functional Filler**
Carl MacAfee and William Schreiber, Lehigh Technologies Inc.
- RS11. New Aliphatic TPU Material Makes PV Solar Panels More Environmentally Friendly**
Chris Cooper, Bayer Material Science LLC
- RS12. Auxiliary Equipment for Reclaim Extrusion**
Keith Larson, Colortronic North America, Inc
- RS13. What Is the Current Regulatory Status and Future Landscape For Flame Retardants?**
Raymond Dawson, Albemarle Corporation
- RS14. Zero Waste Energy Systems Compactors Developed to Remove Liquids from Plastic Containers**
Bruce Coxhead, Zero Waste Energy Systems
- RS15. From Trash to Cash: A Case Study of GLOBAL P.E.T.**
Anthony Georges, AMUT N.A., Inc.
- RS16. Recycling Machinery for Plastics**
Rob Northrup, Advanced Extrusion Solutions
- RS17. Composites from Recycled Plastics Co-Blends with Micro-Fibrillar Structures**
Qinglin Wu, Louisiana State University

Recycling

- R1. Recycling of Agricultural Film**
Werner Herbold, Resource Recycling Systems Inc.
- R2. The Development of HDPE Corrugated Drainage Pipe Containing Recycled HDPE for Highway Applications**
Richard Thomas, TRI/Environmental, Inc.
- R3. Analytical Approaches to Characterize Products and Issues Associated With Recycled Materials**
Jennifer Brooks, Polymer Solutions Incorporated
- R4. New Coupling Technology Helps Olefin-Based Thermoplastic Composites Make Products Greener**
Louis Martin, Addcomp America Ltd.
- R5. Commercial Application of Post Consumer Recycled Resins in Flexible Packaging**
Peter Clark, Kimberly-Clark Corporation

R6. Carpet America Recovery Effort

Frank Hurd, Carpet America Recovery Effort

R7. PET Bottle Recycling

Mike Hendley, Buhler Inc

R8. New Thermoplastic Polyurethane (TPU) From Renewable Sources

Dennis Lauzon, Merquinsa North America

R9. Sorting Out the Economics and Science of Green Polymers

Roger Jones, Franklin International LLC and G.H. Associates

R10. Recycling... It's Not Optional Anymore!

Wolfgang Unger, FRP Green, Inc. / Seawolf Design Inc.

R11. New FR Bayblend GR Resins Based on Post-Consumer Plastic Waste

Marina Rogunova, Bayer MaterialScience LLC

R12. Recycling of PVC

David Yopak, Teknor Apex Corporation

R13. Germanys New Recycling Ways in Packaging Waste

Sascha Schuh, ASCON GmbH

R14. X-ray Fluorescence Spectroscopy (XRF) as a Public Health Screening Tool for the Presence of Hazardous Chemicals in Plastics

Jeff Gearhart, Ecology Center

R15. Physical Properties of Recycled Polypropylene with Agricultural Fillers

Leonardo Simon, University of Waterloo

R16. American Commodities: A Case Study

Scott Melton, American Commodities, Inc

Battelle

B1. Accelerating Development and Commercialization of BioProducts in Ohio

Dennis Hall, OBIC/OSU

B2. Production of Algae in a Hybrid Pond PBR, Primarily for Bio-Plastics and Fuel

Ross Youngs, Univenture

B3. A New Class of Biobased Polyols Utilizing Cost-Effective Feedstocks and their Applications

Jeff Cafmeyer, Battelle

B4. Carbon Footprints -- What are they and what good are they?

Shawn Blenis, Ciba

B5. Improving PLA Performance for Injection-Molding Applications

Corey Linden, Battelle

Student Posters

- SP1. Polylactide/Magnetic Modified Mesoporous Clay Nanocomposites for Food Packaging**
Arunsri Mattayan, Rathanawan Magaraphan & Hathaikarn Manuspiya
Chulalongkorn University
- SP2. Adsorption of Toxic Gases from Gasification Process by Poly(HIPEs)**
Piyada Pannak, Rathanawan Magaraphan, Pomthong Malakul & Manit Nithitanakul
Chulalongkorn University
- SP3. Admicellar Polymerization of Styrene and Methyl Methacrylate on Natural Rubber Latex**
Nuttida Srirachya1, Thanyalak Chaisuwan & Rathanawan Magaraphan
Chulalongkorn University
- SP4. Ethylene Vinyl Acetate Filled with Copper-Nanoclay as Composite Films for Active Packaging**
Mintra Meemusaw & Rathanawan Magaraphan
Chulalongkorn University
- SP5. Reactive Extrusion of Nylon 12/Natural Rubber Compatibilized by in-situ Reactive PS/NR Blend**
Saravalee Saengthaveep & Rathanawan Magaraphan
Chulalongkorn University
- SP6. Synthesis and Thermal Properties of New Biodegradable Polymer EVA-g-PCL and EVA-g-PLA**
Buncherd Ngamnawakul & Rathanawan Magaraphan
Chulalongkorn University
- SP7. Hardening of Silk Sericin-g-PLA/MARL Biocomposites by Polybenzoxazine**
Juthamas Mahajaroensiri, Thanyalak Chaisuwan & Rathanawan Magaraphan
Chulalongkorn University
- SP8. Nanoparticle Titanate-Clay Semiconductor for Dye-Sensitized Solar Cell by Using Natural Dyes**
Ni-on Saelim, Rathanawan Magaraphan & Thammanoon Sreethawong
Chulalongkorn University
- SP9. Effect of Clay on the Mechanical and Thermal Properties of Wood/PLA Composites**
Qingkai Meng & Daniel De Kee
Tulane University
- SP10. An Exploratory Comparative Study on Eco-Impact of Paper and Plastic Bags**
Subramanian S.K Muthu, Y. LI, J.Y. Hu & P.Y. Mok
The Hong Kong Polytechnic University
- SP11. Biodegradable Bale Wrap**
Brad A. Tilman
Pittsburg State University

SP12. Production and Characterization of Banana-Reinforced, Soy Based Unsaturated Polyester and Reinforced Epoxy Composites

Lina Herrera-Estrada, Katherine E. Fancher, Selvum Pillay & Uday K. Vaidya
University of Alabama at Birmingham

SP13. Potential Valorization of Agribusiness Starch Wastes as Lactic Acid Source with Lactobacillus Amylophilus

Andréanne Harbec, Tony Savard & Charles Dubois
Ecole Polytechnique of Montreal

SP14. Mechanical Properties of Recycled Post-Consumer Product with Complex Construction

Mary E. Moriarty & Andrew J. Donovan
University of Massachusetts, Lowell

SP15. Consider “Brown” as the New “Green”: Recycled Polypropylene-Wheat Straw Composites

Zena S. Ng, Leonardo C. Simon, Larry Erickson & Leigh-Anne Marquis
University of Waterloo



2009 GPEC® CONFERENCE - February 25-27, 2009

“Plastics: The Wonderful World of Sustainability & Recycling”

**Disney’s Coronado Springs Resort | *Walt Disney World®*, Florida
Sponsored by the Society of Plastics Engineers, Plastics Environmental Division**

Thursday AM	Recycling FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials FIESTA 6
Thursday PM	Clean Technology Business Plan Competition FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials (Battelle) FIESTA 6
Friday AM	Recycling FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials FIESTA 6
Friday PM	Recycling FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials FIESTA 6

Wednesday , February 25, 2009

1.00-6.00 pm	Registration
3.30-5.30 pm	PED Board Meeting
6.00-7.00 pm	Connections Reception
7.30-8.00 pm	Moderators Pre-Conference Meeting



Thursday, February 26, 2009

7.30-8.25 am			
Breakfast			
Track	Recycling FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials FIESTA 6
Section Moderator	Michael Montpetit	Ray Dawson	Brenda Platt
8.30	Paper R1 Recycling of Agricultural Film <u>Speaker</u> Werner Herbold <u>Affiliation</u> Resource Recycling Systems	Paper RS1 Engineered Recycling Systems for Post-Consumer & Post-Industrial Scrap <u>Speaker</u> Brian Woodcock <u>Affiliation</u> PSI-Polymer Systems	Paper BB1 Quantifying the Biobased Carbon Content within Plastics using ASTM-D6866: A Technical Overview. <u>Speaker</u> Darden Hood <u>Affiliation</u> Beta Analytic
8.55 am	Set-up & Transfer Break		
8.55 - 9.00 am	Set-up & Transfer Break		
9.00	Paper R2 The Development of HDPE Corrugated Drainage Pipe Containing Recycled HDPE for Highway Applications <u>Speaker</u> Richard Thomas <u>Affiliation</u> TRI/Environmental,	Paper RS2 Size Reduction Equipment for Reclaim Extrusion <u>Speaker</u> John Farney <u>Affiliation</u> Cumberland Engineering Corporation	Paper BB2 Curaua Fiber Plastic Composites <u>Speaker</u> Jay Amarasekera <u>Affiliation</u> SABIC Innovative Plastics
9.25 am	Set-up & Transfer Break		
9.25 - 9.30 am	Set-up & Transfer Break		
9.30	Paper R3 Analytical Approaches to Characterize Products & Issues Associated With Recycled Materials <u>Speaker</u> Jennifer Brooks <u>Affiliation</u> Polymer Solutions	Paper RS3 Automated Optical Sorting of Electronic Scrap – Case Studies from the USA & Europe <u>Speaker</u> Felix Hottenstein <u>Affiliation</u> MSS	Paper BB3 Synthesis of Bio Based Epoxy & Curing Agent using Rosin & Study of Cure Reactions <u>Speaker</u> Jinwen Zhang <u>Affiliation</u> Washington State University
9.55 am	Set-up & Transfer Break		
9.55 - 10.00 am	Set-up & Transfer Break		
10.00	Break	Break	Paper BB4 High Performance Bioplastics – Utilizing Castor Oil as a Renewable Feedstock for Polyamide 11 <u>Speaker</u> Todd Rogers <u>Affiliation</u> Arkema
10.25 am	Set-up & Transfer Break		
10.25 - 10.30 am	Set-up & Transfer Break		
10.30	Paper R4 New Coupling Technology Helps Olefin-Based Thermoplastic Composites Make Products Greener <u>Speaker</u> Louis Martin <u>Affiliation</u> Addcomp America	Paper RS4 Titanates & Zirconates for Recycled, Compostable & Biobased Polymer Composites <u>Speaker</u> Sal Monte <u>Affiliation</u> Kenrich	Break
10.55 am	Set-up & Transfer Break		
10.55 – 11.00 am	Set-up & Transfer Break		
11.00	Paper R5 Commercial Application of Post Consumer Recycled Resins in Flexible Packaging <u>Speaker</u> Peter Clark <u>Affiliation</u> Kimberly-Clark Corporation	Paper RS5 Screw Optimization for Bio-Based Resins <u>Speaker</u> Christine Ronaghan <u>Affiliation</u> Davis -Standard Converting Systems	Paper BB5 Conversion of Beer Bottoms Waste & Rice Waste to Biodegradable Plastics via Bacterial Transformation <u>Speaker</u> Joseph Greene <u>Affiliation</u> California State University
11.25 am	Set-up & Transfer Break		
11.25 – 11.30 am	Set-up & Transfer Break		
11.30	Paper R6 Carpet America Recovery Effort <u>Speaker</u> Frank Hurd <u>Affiliation</u> Carpet America Recovery Effort	Paper RS6 How to Reclaim Your Bio Resin Scrap <u>Speaker</u> Bob Harrison <u>Affiliation</u> Wittmann, Inc	Paper BB6 Samsung's Environment-Friendly Materials: Sustainable & Durable <u>Speaker</u> Youngmi Chung <u>Affiliation</u> Samsung Cheil Industries
11.55 am	Transfer		
11.55 am-noon	Transfer		

noon-1.25 pm	Lunch – Plenary		
	Paper Automotive Applications & Expectations of Bio-Based Materials Speaker Eric J. Connell Affiliation Toyota		
1.25-1.30 pm	Set-up & Transfer Break		
Track	Clean Technology Business Plan Competition FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials (Battelle) FIESTA 6
Section Moderator	Eric Koester	Scott Melton	Cindy Conner
1.30	<u>Company</u> Cool Energy, <u>Speaker</u> Sam Weaver	Paper RS7 An Eco-efficiency Life Cycle Analysis of Food Waste Collection & Disposal <u>Speaker</u> Keith Edwards <u>Affiliation</u> BASF Corporation & JF Connolly & Associates	Battelle B1 Accelerating Development & Commercialization of BioProducts in Ohio <u>Speaker</u> Dennis Hall <u>Affiliation</u> OBIC/OSU
1.55 pm		Set-up & Transfer Break	
1.55-2.00 pm	<u>Company</u> Polyflow LLC <u>Speaker</u> Joseph Hensel	Paper RS8 Life-Cycle -Analysis of Hot Beverage Cup Technologies: Coated Paper, PS Foam & Expanded R-PET <u>Speaker</u> Tom Malone <u>Affiliation</u> MicroGREEN Polymers	Battelle B2 Production of Algae in a Hybrid Pond PBR, Primarily for Bio-Plastics & Fuel <u>Speaker</u> Ross Youngs <u>Affiliation</u> Univenture
2.00		Set-up & Transfer Break	
2.25 pm	<u>Company</u> SunBrite Packaging Company, <u>Speaker</u> Lawrence W. Masten	Paper RS9 An Innovative Equipment Solution To Reclaim Post Industrial & Post Consumer Film That Contains High Levels Of Moisture & Printing <u>Speaker</u> Kevin Slusarz <u>Affiliation</u> Davis -Standard, LLC	Battelle B3 A New Class of Biobased Polyols Utilizing Cost-Effective Feedstocks & their Applications <u>Speaker</u> Jeff Cafmeyer <u>Affiliation</u> Battelle
2.25-2.30 pm		Set-up & Transfer Break	
2.30	<u>Company</u> PolyNew, <u>Speaker</u> John Dorgan	Paper RS10 Uses of Recycled Rubber Powder in Thermoplastic Resins as a Feedstock Extender, Impact Modifier & Functional Filler <u>Speaker</u> Carl MacAfee & William Schreiber <u>Affiliation</u> Lehigh Technologies	Battelle B4 Carbon Footprints -- What Are They & What Good Are They? <u>Speaker</u> Shawn Blenis <u>Affiliation</u> Ciba
2.55 pm		Set-up & Transfer Break	
2.55-3.00 pm	<u>Company</u> FRX Polymers, <u>Speaker</u> Marc A. Lebel	Paper RS11 New Aliphatic TPU Material Make PV Solar Panels More Environmentally Friendly <u>Speaker</u> Chris Cooper <u>Affiliation</u> Bayer Material Science LLC	Battelle B5 Improving PLA Performance for Injection-Molding Applications <u>Speaker</u> Corey Linden <u>Affiliation</u> Battelle
3.00		Set-up & Transfer Break	
3.25 pm	<u>Company</u> Exotech Bio Solution <u>Speaker</u> Zvika Meiri		
3.25-3.30 pm		Set-up & Transfer Break	
3.30			
3.55 pm			
3.55-4.00 pm	Close of Paper Section		
4.00-6.00 pm	Student Poster Session		
6.00-7.00 pm	Reception		
7.00-9.00 pm	Awards Dinner		

Friday, February 27, 2009

7.30-8.25	Breakfast		
Track	Recycling FIESTA 1-3	Reclamation & Supply FIESTA 7-10	Bio-based & Biodegradable Materials FIESTA 6
Section Moderator	Leonardo Simon	Dennis Denton	Richard Bopp
8.30	Paper R7 PET Bottle Recycling <u>Speaker</u> Mike Hendley <u>Affiliation</u> Buhler	Paper RS12 Auxiliary Equipment for Reclaim Extrusion <u>Speaker</u> Keith Larson <u>Affiliation</u> Colortronic North America	Paper BB7 Impact-Modified PC Blends with Sustainable, Environment-Friendly Polylactide <u>Speaker</u> James Chung <u>Affiliation</u> Bayer Material Science LLC
8.55 am	Set-up & Transfer Break		
8.55 - 9.00 am	Set-up & Transfer Break		
9.00	Paper R8 New Thermoplastic Polyurethane (TPU) From Renewable Sources <u>Speaker</u> Dennis Lauzon <u>Affiliation</u> Merquinsa North America	Paper RS13 What Is the Current Regulatory Status & Future Landscape For Flame Retardants? <u>Speaker</u> Raymond Dawson <u>Affiliation</u> Albemarle Corp.	Paper BB8 Mirel Biobased, Biodegradable Polyhydroxyalkanoates (PHAs): Renewable Materials for the Growing Bioplastics Marketplace <u>Speaker</u> Kristin Taylor <u>Affiliation</u> Telles, Metabolix & ADM JV
9.25 am	Set-up & Transfer Break		
9.25 - 9.30 am	Set-up & Transfer Break		
9.30	Paper R9 Sorting Out the Economics & Science of Green Polymers <u>Speaker</u> Roger Jones <u>Affiliation</u> Franklin International LLC & G.H. Associates	Paper RS14 Zero Waste Energy Systems Compactors Developed to Remove Liquids from Plastic Containers <u>Speaker</u> Bruce Coxhead <u>Affiliation</u> Zero Waste Energy Systems	Paper BB9 Advances in the Manufacture, Development & Commercialization of Poly Hydroxy Butyrate Valerate (PHBV) Biopolymers <u>Speaker</u> Jim Lunt <u>Affiliation</u> Tianan Biologic
9.55 am	Set-up & Transfer Break		
9.55 - 10.00 am	Set-up & Transfer Break		
10.00	Break	Break	Paper BB10 Oxo-Biodegradable Plastics <u>Speaker</u> Michael Stephen <u>Affiliation</u> Symphony Environmental Technologies
10.25 am	Set-up & Transfer Break		
10.25 - 10.30 am	Set-up & Transfer Break		
10.30	Paper R10 Recycling... It's Not Optional Anymore! <u>Speaker</u> Wolfgang Unger <u>Affiliation</u> FRP Green / Seawolf Design	Paper RS15 From Trash to Cash: A Case Study of GLOBAL P.E.T. <u>Speaker</u> Anthony Georges <u>Affiliation</u> AMUT N.A.	Break
10.55 am	Set-up & Transfer Break		
10.55 - 11.00 am	Set-up & Transfer Break		
11.00	Paper R11 New FR Bayblend GR Resins Based on Post-Consumer Plastic Waste <u>Speaker</u> Marina Rogunova <u>Affiliation</u> Bayer MaterialScience	Paper RS16 Recycling Machinery for Plastics <u>Speaker</u> Rob Northrup <u>Affiliation</u> Advanced Extrusion Solutions	Paper BB11 Sustainable Communities Need Sustainable Biomaterials <u>Speaker</u> Brenda Platt <u>Affiliation</u> Institute for Local Self-Reliance
11.25 am	Set-up & Transfer Break		
11.25 - 11.30 am	Set-up & Transfer Break		
11.30	Paper R12 Recycling of PVC <u>Speaker</u> David Yopak <u>Affiliation</u> Teknor Apex Corporation	Paper RS17 Composites from Recycled Plastics Co-Blends with Micro-Fibrillar Structures <u>Speaker</u> Qinglin Wu <u>Affiliation</u> Louisiana State University	Paper BB12 Advanced Hybrid Composite Materials Biodegradable Super Absorbent Polymer <u>Speaker</u> Zvika Meiri <u>Affiliation</u> Exotech BioSolutions
11.55 am	Transfer		
11.55 am-noon	Transfer		

noon-1.25 pm	Lunch – Plenary		
	Paper Climate Change by the Numbers Speaker John Christy Affiliation University of Alabama		
1.25-1.30 pm	Set-up & Transfer Break		
Track	Recycling FIESTA 1-3	Recycling FIESTA 7-10	Bio-based & Biodegradable Materials FIESTA 6
Section Moderator	Susan Landry	Larry Koester	Subu Subramanian
1.30	Paper R13 Germany's New Recycling Ways In Packaging Waste <u>Speaker</u> Sascha Schuh <u>Affiliation</u> ASCON GmbH	Paper R15 Physical Properties of Recycled Polypropylene with Agricultural Fillers <u>Speaker</u> Leonardo Simon <u>Affiliation</u> University of Waterloo	Paper BB13 Improvement of Mechanical Properties of Southern Yellow Pine through Impregnation with BORR Resin <u>Speaker</u> Katerina Sanchez <u>Affiliation</u> University of Wisconsin – Madison
1.55 pm			
1.55-2.00 pm	Set-up & Transfer Break		
2.00	Paper R14 X-ray Fluorescence Spectroscopy (XRF) as a Public Health Screening Tool for the Presence of Hazardous Chemicals in Plastics <u>Speaker</u> Jeff Gearhart <u>Affiliation</u> Ecology Center	Paper R16 American Commodities: A Case Study <u>Speaker</u> Scott Melton <u>Affiliation</u> American Commodities	Paper BB14 Novel Bioplastic Blends and Nanocomposite <u>Speaker</u> John Dorgan <u>Affiliation</u> Colorado School of Mines
2.25 pm			
2.25-2.30 pm	Set-up & Transfer Break		
2.30		State of the Union Panel Discussion Lead By Susan Kozora GPEC 2009 Conference Chair (Panel ends at 4.00 pm)	Paper BB15 Novel Method to Control the Rheological Properties & Processability for Microbial Poly(3-hydroxybutyrate) <u>Speaker</u> Masayuki Yamaguchi <u>Affiliation</u> J.A.I.S.T.
2.55 pm			
3.00 pm			
3.00			Paper BB16 Characterization of Polystyrene-g-Polylactide Synthesized by Grafting-From Method <u>Speaker</u> Rathanawan Magaraphan <u>Affiliation</u> Chulalongkorn Universtiy
3.25 pm			
4.00 pm	End of Conference		

Judges for the Clean Technology Business Plan Competition

Jamie Boyd, Senior Vice President, Cascadia Capital

Rick Heggs, Director of Biobased Materials Strategy, Battelle

P.M. (Subu) Subramanian, SPM Technologies

Neil Cameron, Advanced Materials Specialist, Emerald Technology Ventures

Cathleen Hess, Head of Sustainability, SABIC Innovative Plastics

Tony Deligio, Senior Editor, Modern Plastics Worldwide