# TABLE OF CONTENTS

## Volume 1

**BIO-BASED AND BIODEGRADABLE MATERIALS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Polymeric Chain Extenders and Biopolymers</td>
<td>Roelof van der Meer, Volker Frenz, Marco Villalobos, Abiodun Awojulu</td>
<td>1</td>
</tr>
<tr>
<td>B2</td>
<td>Manufacture and Applications of PHBV Polymers</td>
<td>Jim Lunt, Xuejun Chen</td>
<td>25</td>
</tr>
<tr>
<td>B3</td>
<td>Recycling of Packaging Products Including Biodegradable Plastic Materials Such As PLA Foam, Plastic Fibers and Non-woven Materials</td>
<td>Alberto E. Ramírez</td>
<td>48</td>
</tr>
<tr>
<td>B4</td>
<td>Can I Run PLA on My Existing Extruders? A Practical Application Guide</td>
<td>Edward L. Steward</td>
<td>80</td>
</tr>
<tr>
<td>B6</td>
<td>Degradation of Biodegradable, UV-degradable and Oxodegradable Plastics with In-vessel Food Waste Composting Environment</td>
<td>Joseph Greene, Fengyu Wang</td>
<td>111</td>
</tr>
<tr>
<td>B7</td>
<td>Banana Fiber Composites</td>
<td>Lina-Herrera Estrada, Carol Ochoa, Saeed Huda, Haibin Ning, Selvum Pillay, Uday K. Vaidya</td>
<td>147</td>
</tr>
<tr>
<td>B8</td>
<td>Bio-Based Technology for Powder Coatings</td>
<td>Damiano Beccaria, Bhima Vijayendran, Kathy Mitchell</td>
<td>173</td>
</tr>
<tr>
<td>B10</td>
<td>Corn (Sugars) Based Polymer Chemistries</td>
<td>Michael Jaffe, George Collins, Anthony J. East, Willis Hammond, Paul Friedhoff</td>
<td>224</td>
</tr>
<tr>
<td>B12</td>
<td>Development and Implementation of Soy-Based Foam in Automotive Applications</td>
<td>Cynthia M. Flanigan, Christine Perry, Deborah F. Mielewski, Asad Ali, Ashford Galbreath</td>
<td>300</td>
</tr>
<tr>
<td>B13</td>
<td>Advanced Materials from Novel Bio-based Resins</td>
<td>Shiriram Bagrodia</td>
<td>346</td>
</tr>
<tr>
<td>B14</td>
<td>Bioplastics in Supermarket Applications in UK</td>
<td>Robert Drorak, Edward Kostor</td>
<td>386</td>
</tr>
<tr>
<td>B15</td>
<td>Sustainable Materials for Packaging and Injection Moulding Applications</td>
<td>Kishan Khemani</td>
<td>387</td>
</tr>
<tr>
<td>B16</td>
<td>High Performance Polymers made with Renewable Resources</td>
<td>Joe Kurian</td>
<td>388</td>
</tr>
</tbody>
</table>

## RECLAMATION & SUPPLY

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS1</td>
<td>PET recycling: 2 case studies in Austria</td>
<td>Barry B. Hunter, Elfriede Hell</td>
<td>389</td>
</tr>
<tr>
<td>RS2</td>
<td>Vertically Integrated Value Adding (VIVA) to the Co-mingled Plastics Stream of Packaging Recyclables of PCR or PIR</td>
<td>Alfred Eiden</td>
<td>428</td>
</tr>
<tr>
<td>RS3</td>
<td>Tricks of the Trade: Tools for Successful Implementation of Programs Using Recycled</td>
<td>Rod Jackson</td>
<td>454</td>
</tr>
<tr>
<td>RS4</td>
<td>Using Recycled Polyethylene: Avoiding the Pitfalls</td>
<td>Frits van der Klooster, Chris Ernst</td>
<td>472</td>
</tr>
<tr>
<td>RS6</td>
<td>The Litterability of Plastic Bags: Key Design Criteria</td>
<td>K. Verghese, M. Jollands, M. Allan</td>
<td>536</td>
</tr>
</tbody>
</table>
RS7. Economic and Environmental Comparison of Reprocessed Polyethylene versus Virgin Polyethylene Liners ............................................................................................................................... 570
  Lan Nguyen, Frank Ruiz, Nigel Lawrence

Volume 2

RS8. What’s New in Size Reduction for Effective Reclamation ................................................................. 618
  John Farney
RS9. What’s New in Material Handling for Reclaim Extrusion ................................................................. 656
  Keith Larson
RS10. Low Bulk Density Scrap Recycling/Reclaim Options ................................................................. 713
    Dana Darley
    Edward Kosior, Robert Dvorak
RS12. The Use of Peroxide Masterbatches in the Processing of Regrind and Post Consumer Waste .......... 806
    Marty Paisner

RECYCLING

R1. Characterization of Post-Consumer Plastic mixtures Compatibilized by Block Copolymers – Part II ............................................................................................................................... 843
    Sarah Bobek, Aniket Selarka, Ned V. Gvozdic, Charles L. Beatty
R2. Recycling of Long Glass Fiber Reinforced, Padded Instrument Panels ........................................ 844
    Robert Egbers
R3. Automotive Interior Material Recycling and Design Optimization for Sustainability and End of Life Requirements ............................................................................................................................... 883
    Steven R. Sopher
R4. Sustainable Automotive Component Manufacturing Solutions ......................................................... 925
    Gordon C. Miller
R5. Plastic Composite Railroad Crossties .............................................................................................. 955
    Henry Sullivan
R6. MSS Optical Sorting Technologies for Automated Sorting of Electronic Scrap – Practical Case Studies from the USA ............................................................................................................................... 976
    Felix A. Hottenstein
R7. Flame Retardants: Regulatory Issues and Landscape ...................................................................... 1002
    Raymond B. Dawson, Susan D. Landry
    Susan D. Landry
    Eric Koester
R10. PIQET: A Life Cycle Management Tool for Sustainable Plastics Packaging .................................. 1085
    J. Majumdar, K. Verghese, L. Fitzpatrick

STUDENT POSTERS

The Degradation of Biodegradable Polylactide Correlated to the Average Molecular Weight ................................................. 1126
    Rocco Viggiano, Christopher Mann
Recycling in the Caribbean ............................................................................................................................... 1127
    Jesse Haedrich
Nanotechnology Safety Education ............................................................................................................................... 1128
    Obiageli B. Onovo, Kishanchandra Golla, Chris C. Ibeh
Review of Utilization of Waste Tires in Asphalt .......................................................................................... 1130
    Khaldoun Shatanawi, Carl Thodesen
Review of Waste Product Utilization in Highway Construction .................................................................. 1131
    Khaldoun Shatanawi, Carl Thodesen
Degradation of Polylactic Acid (PLA) Exposed to Steam ............................................................................. 1132
    L.F. Vargas, B. Welt, P. Pullammanappallil, A. Teixeira, M. Balaban, C. Beatty,
Preparation and Thermal Analysis of Polyurethane Composite Using Oil Palm Based Polyol and Fiber
Min Min A., Yaakob, Z., Mohd Hilmi M., Khairul Zaman Hj, Kamarudin S. K.K

New Polyacetal Polyols for Polyurethanes
Mihail Ionescu, Semonti Sinharoy, Zoran S. Petrovic

Thermoplastic Starch
Michael Thurman

Alternative Techniques to Characterize Polyester Based Biopolymers
Andréanne Harbec, Florine Maes, Marie-Claude Heuzy, Louis-Simon Lussier, Charles Dubois

Postconsumer HDPE/Agave Fibre Foamed Composites Coated with Chitosan Used for Removal of Heavy Metals
M.O. Vazquez, V.S. Herrera, C. Gomez, D. Rodriguez, R. Gonzalez-Noneza

PLA and Cellulose Based Degradable Polymer Composites
Mihir A. Oka

2008 Clean Technology Business Forum & Competition

Author Index