International Conference and Exhibition on
Biopolymers and Bioplastics
August 10-12, 2015   San Francisco, USA
Track 9: Polyhydroxyalkanoates

Session Chair: Nazim Cicek, University of Manitoba, Canada
Session Co-chair: Steven Pratt, The University of Queensland, Australia

Session Introduction

09.50-10.10
Microbial conversion of biodiesel waste products into medium chain length polyhydroxyalkanoates (mcl-PHA) using *Pseudomonas putida* LS46

Nazim Cicek, University of Manitoba, Canada

Biocomposites from waste-derived polyhydroxyalkanoate (PHA): mixed culture generation of polyhydroxybutyrate-co-valerate (PHBV) copolymers and their inclusion in wood plastic composites

Steven Pratt, The University of Queensland, Australia

10.10-10.30
Acidogenic valorisation of food industry wastes for polyhydroxyalkanoate (PHA) biosynthesis

Maria Reis, Universidade Nova de Lisboa, Portugal

10.30-10.50
PHA copolymers from methane

Jaewook Myung, Stanford University, USA

10.50-11.05

Group Photo

Coffee Break: 11.05-11.20 @ Sierra A

Track 2: Future and Scope for Biopolymers and Bioplastics

Track 8: Production and Commercialization of Biopolymers and Bioplastics

Session Chair: Bingkun K Chen, Mayo Clinic, USA
Session Co-chair: Bo Shi, Kimberly-Clark Corporation, USA

Session Introduction

11.20-11.40
Bio-based polyethylene blends including non-wood biomass materials

Bo Shi, Kimberly-Clark Corporation, USA

11.40-12.00
Extrusion processing of zein to provide higher value with improved processability

Gordon Selling, United States Department of Agriculture, USA

12.00-12.20
Emerging electrospun lignin fibers: Carbonization and characterization

Manjusri Misra, University of Guelph, Canada

12.20-12.40
Symbiosis of chemistry and biology: BASF’s biodegradable and renewable polymers

Andreas Künkel, BASF SE, Germany

12.40-13.00
Continuous casting: A soft processing approach to fabricate polysaccharides-based bioplastics

Francys K V Moreira, Embrapa Instrumentation, Brazil

13.00-13.15
Low temperature lipase-catalysed synthesis of renewable functional telechelic polyesters in supercritical CO₂

Silvio Curia, University of Nottingham, UK
Day 2 August 11, 2015

Sierra B

Keynote Forum

08:55-09:00 Introduction
09:00-09.25 Richard A Gross
Rensselaer Polytechnic Institute, USA

Track 4: Plastic Pollution and Waste Management
Track 5: Biocomposites

Session Chair: Ignacy Jakubowicz, SP Technical Research Institute of Sweden, Sweden
Session Co-chair: Paulo Sobral, Duque de Caxias Norte, Brazil

09.25-09.45 How to make “green” plastics “greener”
Ignacy Jakubowicz, SP Technical Research Institute of Sweden, Sweden

09.45-10.05 Preparing for future recycling of “green” alternatives- recycling of polyamides
Jonas Enebro, SP Technical Research Institute of Sweden, Sweden

10.05-10.25 Recycling of blends composed of petro- and bio-based plastics
Nazdaneh Yarahmadi, SP Technical Research Institute of Sweden, Sweden

10.25-10.45 Process simulation of plastics pyrolysis for the production of fuels and chemical feedstock
Nasir M A Al Lagtah, Newcastle University International Singapore, Singapore

10.45-11.05 By-products as a raw material sources – Polish wheat bran packaging Biotrem
Jaonna Kuzincow, COBRO-Packaging Research Institute, Poland

Coffee Break: 11.05-11.20 @ Sierra A

11.20-11.40 Upgrading vegetable oil thermosets through copolymer reinforcement with tannin-lipid conjugates
Warren Grigsby, Scion, New Zealand

11.40-12.00 Cost effective production and applications of levan from Acetobacter xylinum NCIM 2526 using synthetic and complex medium
Kiran Babu Uppuluri, SASTRA University, India

12.00-12.20 Certification systems in the environmental field
Oliver Ehler, DIN CERTCO GmbH, Germany

12.20-12.40 Utilization of microalgal-derived ash as a mineral reinforcement material in biocomposite formulation with polyvinyl alcohol
Dang-Thuan Tran, KAIST, Korea

12.40-13.00 Nano-engineered natural fiber in biocomposites and bisorption
Aman Ullah, University of Alberta, Canada

Lunch Break: 13.00-13.45 @ Sequoia-Redwood
Day 3 August 12, 2015

Sierra B

Keynote Forum

09:00-09:25  David Grewell
Center for Bioplastics and Biocomposites, USA

09:25-09:50  Francys Moreira
National Nanotechnology Laboratory for Agribusiness (LNNA), Brazil

Track 1: Green Chemicals : Biopolymers and Bioplastics

Session Chair: Jian Yu, University of Hawaii at Manoa, USA
Session Co-chair: Warren Grigsby, Scion, New Zealand

09.50-10.10  A green plastic formed directly from carbon dioxide and sunlight
Jian Yu, University of Hawaii at Manoa, USA

10.10-10.30  Modifying plastics with functional additives based on condensed tannin esters
Warren Grigsby, Scion, New Zealand

10.30-10.50  Calcium-hyaluronic acid hybrid film for the promotion of skin regeneration
Woo-Kul Lee, Dankook University, Korea

10.50-11.10  Synthesis, properties, and structure of alternating copolymers of 3-hydroxybutyrate and lactate units
Hideki Abe, RIKEN Center for Sustainable Resource Science, Japan

Coffee Break: 11.10-11.25 @ Sierra A

11.25-11.45  The regulatory landscape for novel polymers
Richard E Engler, Bergeson & Campbell, USA

11.45-11.55  Group IV complexes of tridentate salicylaldehyde ligands and their catalytic activity in ring-opening polymerizations of ε-caprolactone, lactides and epoxides
Dipa Mandal, IIT Madras, India
11.55-12.05 Group IV complexes as initiators for the ring opening polymerization studies: ligand and metal screening  
**Pappuru Sreenath,** IIT Madras, India

12.05-12.15 Novel phenolic derivatives of pectin: Enzymatic synthesis and properties  
**Karaki Nadine,** Université de Lorraine, France

**Track 3: Biorefineries and Industrial Biotechnology, Different Uses of Bioplastics**  
**Track 7: Biofibers and Microbial cellulose**

**Session Chair:** Peter Keeling, CBiRC, USA  
**Session Co-chair:** Monique Lacroix, Laboratoires de recherche en Sciences, Canada

12.15-12.35 Innovations and developments towards advanced biomanufacturing of biobased chemicals  
**Peter Keeling,** CBiRC, USA

12.35-12.55 New development of application of nanocellulose for food packaging application  
**Monique Lacroix,** Laboratoires de recherche en Sciences, Canada

12.55-13.15 Biomineralized (CaCO3) bacterial cellulose: A novel functional biomaterial  
**Nabanita Saha,** Tomas Bata University in Zlin, Czech Republic

**Lunch Break:** 13.15-14.00 @ Sequoia-Redwood

14.00-14.20 Compatibilization of microfibrillated cellulose for bio-based nano-composites through functionalized interface engineering  
**Pieter Samyn,** University of Freiburg, Germany

14.20-14.40 Physical-mechanical properties of hydroxypropyl methylcellulose films as affected by molecular weight and methoxyl content  
**Caio G. Otoni,** Federal University of São Carlos, Brazil

14.40-15.00 Sugarcane based polyethylene - The transition from fossil to plants  
**Joe Jankowski,** Braskem America, USA

15.00-15.10 Characterisation of nanocelluloses from banana pseudo-stem as biomaterial in biodegradable food packaging  
**R H Fitri Faradilla,** UNSW, Australia

15.10-15.30 Cellulose nanocrystals: Potential nanofiller for food packaging and catalytic applications  
**Vimal Katiyar,** Indian Institute of Technology Guwahati, India

15.30-15.50 Microalgae engineering aspects of biopolymer production  
**Jorge Alberto Vieira Costa,** Federal University of Rio Grande, Brazil

15.50-16.50 Workshop on Development of Polymeric Materials from renewable sources using Nanotechnology by Francys Moreira & Caio Otoni, National Nanotech Laboratory for Research in Agriculture Embrapa, Brazil

**Coffee Break:** 16.50-17.15 @ Sierra A

**Award Ceremony**