

# biopolymers symposium



The industry's market leading event where new technologies, trends, developments in applications, new guidelines and waste strategies are unveiled

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## Biopolymers Symposium 2010

October 11-13, 2010  
The Westin Tabor Center  
Denver, Colorado, US

### Symposium highlights:

- Pioneering work on green policy in California
- Identification of non-food sources of raw material for resin production
- Market overviews from the US and Europe
- Regulation, labeling and marketing sessions
- End of life management options
- Technological innovation in packaging and beyond

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## About the symposium

With biopolymers strengthening their foothold in the mainstream plastics industry, **Biopolymers Symposium 2010** brings together the industry's movers and shakers from leading manufacturers, brand owners, end users, innovators and policy makers to address key elements in the market development.

Convergence of policy, regulation, labeling, end of life management and product performance make 2010 a critical year in the development of this fast-moving industry. **Biopolymers Symposium 2010** provides the top networking and educational forum for leading players from around the globe to present state of the art technologies and to participate in a joint approach to increasing market share.

Initially regarded as suitable only for short-life, single-use packaging items, the applications for biopolymers are extending into semi-durable and durable items in areas such as consumer electronics and automotive engineering. High performance, high technology biopolymers are becoming the standard for this industry. At **Biopolymers Symposium 2010**, attendees will gain an understanding of the key emerging applications and much, much more.

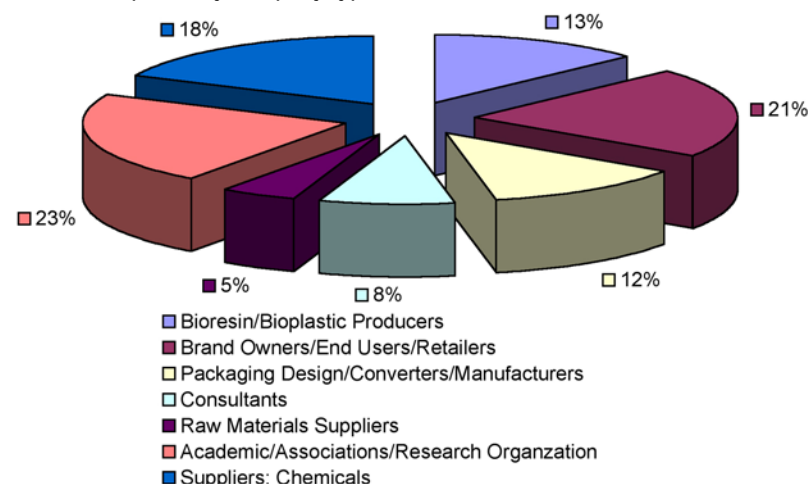
## 2009 Biopolymers Symposium Highlights

152  
Delegates

127  
Companies  
Represented

6  
Featured  
Exhibitors

Attendee profile by company type



## 2009 Biopolymers Symposium Attendees

Accredo Packaging, Inc.	Management Board	Dow Chemical	Handgards Inc	ITRI	National Starch LLC	Plantic Technologies	Schottensten, Zox & Dunn	Toray Industries (America),Inc
Amynis Biotechnologies	California State University	DuPont Building Innovations	Herman Miller Inc.	Japan Bioplastics Association	Natura	Plantic Technologies Ltd.	Shaw Industries Group Inc	Toray Plastics
Arkema	Cereplast Inc.	Eastman Chemical Company	HGCA	John B. Sanfilippo & Son	Natureworks LLC	PolyOne	Specialty Minerals	U.S. Department of Agriculture (USDA)
Avantium Technologies BV	Chicago Biodiesel Group	Edwards Lifesciences, LLC	Holland Colours Americas Inc.	Kline & Co	Newell Rubbermaid	Presto Products Company	Sumitomo Chemical America Inc	University of Massachusetts Lowell
B9 Plastics	Ciba Expert Services	Eindhoven University of Technology	Imerys	Kraft	Nextek Limited	Primo Water	Sustainable Biomaterials Collaborative/ILSR	University of Wales, Bangor
Ball Horticultural Company	Clarifoil	ENTEK Extruders	In3 BioRenewables	kT Innovations, LLC	NIST-Materials and Products Group	Procter & Gamble	Symphony Environmental Ltd	Wacker Chemical Corp.
BASF Corporation	Clean Production Action	EPI Environmental Products	Inha University - Department of Polymer Science and Engineering	LBP Manufacturing, Inc.	Novamont SpA	PURAC America, Inc.	Syngene International Limited	Wm. Wrigley Jr. Company
Biobag International USA Inc	Clemson University	European Bioplastics	Innova Films UK	L'Oreal USA	Novaspact	Resirene SA de CV	Teknor Apex	
Bioplastics Magazine	Colgate Palmolive	Evergreen Packaging Inc	Institute for Agriculture and Trade Policy	Mantrose-Haeuser Co., Inc.	Novus International	Rexam Plastics Packaging	Telles.Metabolix	
Bioscience Ventures Inc	Converting Influence	Frito Lay Inc	Institute for Local Self-Reliance	Market-Intell LLC	Ohio State University	Rubbermaid Food & Home Products	Tetra Pak	
Bostik Inc	Cooler	Genpak	Interfacial Solutions	MBI	Omni Tech International for United Soybean Board	SABIC	The Coca-Cola Company	
Brabender Technologie Inc	Cooley Godward Kronish LLP	Georgia-Pacific Corp	Irvista	Method Products Inc	Organic Recycling Solutions LLC	Sara Lee	The Hallstar Company	
Cadillac Products Packaging Company	Corn Products Brasil	Interfacial Solutions	Iowa State University Extension, CIRAS	Michigan State University	Packaging World	Sarnia-Lambton Economic Partnership	The Timberland Company	
California Environmental Protection Agency	Corporativo Bimbo	Green Seal		Mitsui Chemicals,Inc.	PepsiCo	SC Johnson & Son Inc	Tianan Biologic Materials Company Ltd	
California Integrated Waste	Dart Container Corp	Greenopolis.com		Morehouse Parish - Chamber of Commerce	Petrobras	SCA Hygiene Products AB		
	Department of Louisiana Economic Development	Grupo Bimbo		Myriant Technologies				

## Workshop - Using Bio (Renewable) Content and Biodegradability to Design and Engineer Green Products

### Reducing Carbon Footprint and End-of-life Strategies

Registration begins at 8:30 a.m. Program runs from 9 a.m.-12 p.m. and 1:30 p.m.-5 p.m. (Additional fee of \$799)

#### WORKSHOP OBJECTIVES

Biobased and biodegradable plastics and products are finding increasing attention as materials of choice for industrial and consumer applications. This short course teaches the principles and concepts of this new and emerging technology, its rationale and drivers, and the value proposition it offers to businesses. Businesses researching polymer materials or environmental issues and policies would greatly benefit from the course as it will help in learning and understanding the fundamental principles, and value proposition of biobased and biodegradable plastics and products for carbon management and environmental responsibility and compliance. More specifically, participants will learn carbon footprint basics, evaluate and report material carbon footprinting using biocarbon content analysis. They will learn to use LCA (Life cycle Assessment) tools to calculate process carbon and total environmental footprint of materials, specifically focusing on bioplastics. The class will explore end of life strategies with special focus on biodegradability and the hypes and misleading claims in this space. Participants will also study the technology road map for bioplastics and understand the various classes and technology platforms forming the bioplastics materials space.

#### WORKSHOP OUTLINE

##### What Feedstock (Biomass or Petro/fossil) Should you Use in Designing and Engineering your (Carbon Based) Plastics/Products?

- Origins of the "carbon" in your product/material
- Value proposition for "biobased materials"; "biodegradable materials"; Terminology/definitions and relationship - The "biological carbon cycle"

##### Calculating and Communicating Bio Carbon Content Value Proposition

- Carbon Footprint Basics: Introducing concepts of material carbon & process carbon footprint (LCA - life cycle assessment)
- Calculate bio (carbon) content and use it to report carbon footprint (CO<sub>2</sub>) reductions - material carbon footprint reductions

##### End-of-life Strategy for BioPlastics - What Happens to Product After Use When it Enters the Waste Stream

- Design for biodegradability (in what disposal environment?)
  - Compostability, anaerobic digestion
- Recycling, energy recovery (Collection, buy back, mail back programs)
- Misleading and deceptive biodegradability claims - Beware!
- Standards for measuring biodegradability

##### Technology Road Map

- Understand and evaluate all the biofeedstocks available for manufacture and the related biological and chemical technology platforms for manufacture.
- Fundamental understanding of the technology platforms (both chemical and biological) for manufacturing bio monomers and bioresins using carbohydrates, vegetable oil and other biosubstrates.

#### WORKSHOP LEADER

**Dr. Ramani Narayan, University Distinguished Professor, Department of Chemical Engineering & Materials Science, MICHIGAN STATE UNIVERSITY**

Seminar 1 - 11:30am to 2:30pm (Additional fee of \$399)

### Aren't We Green Enough Already? Green Chemistry and the Lifecycle of Plastics

This seminar will present an introduction and overview of the twelve principles of Green Chemistry, starting from the definition of Green Chemistry from Paul Anastas and John Warner. At the core of green chemistry are the principles of reducing hazard while improving efficiency, and designing chemicals whose lifecycle can be described as "cradle to cradle". We will talk about efforts to regulate and legislate chemicals in the U.S. and internationally - including examples from states - and the potential design and manufacturing effects for companies who want to be competitive not only in the international market, but throughout the U.S. where a growing number of states are banning some kinds of plastics.

#### Seminar Instructor

**Lin Kaatz Chary, PhD, MPH, Project Director, GREAT LAKES GREEN CHEMISTRY NETWORK**

- Introduction to the definition and twelve principles of Green Chemistry
- Hazard vs. risk - Type 1 and Type 2 errors
- Cradle to cradle lifecycle analysis
- It's all in the design
  - Substitutions and alternatives
  - Green Chemistry vs. Green Washing
- Translating principles into policy
  - Setting the bar
  - Driving continuous improvement
  - Promoting innovation
- Policy and markets - who's in the driver's seat?
  - Bisphenol-A
  - State policies
  - Green investing

Seminar 2 - 3:00pm to 6:00pm (Additional fee of \$399)

### Bio-based Plastics and End of Life Management Options

This seminar will consider the possible end of life management options for bio-based plastics in the context of the waste management hierarchy and a discussion about how end of life management can dramatically effect the lifecycle assessment of a product with a bio-based plastic content.

#### Seminar Instructor

**Dr. Paul Fowler, Director, Welsh Institute for Natural Resources, BANGOR UNIVERSITY**

- What options are available?
- How are policy and strategy for waste management developing?
- How can bio-based plastics help in the management of biodegradable municipal waste?

Seminar 3 - 8:00am to 11:00am (Additional fee of \$399)

### Introduction to Bioplastics

This short course presents the basics of bioplastics. It is intended for a broad audience who've recently entered this industry. Such an audience may include scientists, chemists, material engineers, application development engineers, design engineers, process engineers, mold makers, mechanical engineers, technical service engineers, marketing, market development, sales, and research and development engineers.

#### Seminar Instructor

**Edwin Tam, Manager, New Strategic Initiatives, TEKNOR APEX COMPANY**

- The driving forces behind the bioplastics industry
- The size of the Bioplastics Market
- Terminology
- Types of Bioplastics, its properties and processing (Starch-based, PLA, PBAT, PHA)
- ASTM Test Standards governing Bioplastics
- Certification
- Life cycle analysis
- Typical Bioplastics markets and applications
- Hurdles faced by the Bioplastics industry
- How to choose the right Bioplastics for your application
- Examples of manufacturers or suppliers of Bioplastics polymers and compounds



**California's Initiatives Leading the Way in Green Chemistry and Biopolymer Use**

Maureen Gorsen, Partner,  
ALSTON & BIRD LLP



**Consumer Applications Session**

Derek Campbell, Manager of  
Footwear Future Concepts,  
BROOKS SPORTS



**Technology Developments Session**

Dr. Ramani Narayan, University  
Distinguished Professor, MICHIGAN  
STATE UNIVERSITY DEPARTMENT OF  
CHEMICAL ENGINEERING  
& MATERIALS SCIENCE



**Regulations and Metrics Session**

Eric Koester, Attorney,  
COOLEY GODWARD KRONISH LLP



**Waste Stream, Recycling and End of Life Session**

John Williams, Polymers & Materials  
Manager, NATIONAL NON FOOD  
CROPS CENTRE, YORK



**Lessons from Europe**

Andy Sweetman,  
Chairman of the Board,  
EUROPEAN BIOPLASTICS



**Developments on Existing and Emerging Feedstock's Session**

Jim Kleinschmit, Director of Rural  
Communities Program,  
INSTITUTE FOR AGRICULTURE  
AND TRADE POLICY



**Green Marketing and Eco-labels Session**

Dr. Anastasia O'Rourke,  
Co-Founder,  
BIG ROOM, INC.



**Developments in Packaging Applications**

Scott A. Vitters, Global Director,  
Sustainable Packaging,  
THE COCA-COLA COMPANY



**Key Players in Bio-polyesters**

Dr. Paul Fowler, Director,  
Welsh Institute for  
Natural Resources,  
BANGOR UNIVERSITY



**Innovations in Materials**

Mark Bunger, Research Director,  
LUX RESEARCH



**US Market Overview**

Corey Linden, Research Scientist,  
BATTELLE



**Facilitating Markets for Bio-based Materials**

Kate Lewis, USDA BIOPREFERRED  
PROGRAM

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7:15am REGISTRATION AND CONTINENTAL BREAKFAST

8:00am OPENING REMARKS BY THE CHAIRS

### California's Initiatives Leading the Way in Green Chemistry and Biopolymer Use

Discover in this session how policy and regulation in one of the United States' foremost green states is shaping biopolymer use and promoting innovative science, life cycle modelling and green chemistry to generate second and third generation biopolymers for the plastics industry.

#### Opening remarks by the chair

**Maureen Gorsen, Partner, ALSTON & BIRD LLP**

### California's Laws and Policies on Green Chemistry and Epr and their Effects on Biopolymer's Use

- Overview of legislative policy context
- Recent legislative and regulatory efforts
- Green chemistry
- Extended producer responsibility
- Other take back laws
- Other ban bills on ingredients in products leading to the need for more biopolymers

**Maureen Gorsen, Partner, ALSTON & BIRD LLP**

### Biopolymer Solutions

- Momentum shifts
- Formulating unique benefits
- Applications & opportunities

**Kaj Johnson, Green Chef, METHOD**

### The Use of Heterogeneous Waste Feedstocks for Bio-polymer Production Use of raw sewage into PHA (a biodegradable plastic)

**John Bissell, CEO, MICROMIDAS**

### Alternatives Assessment and Cradle to Cradle Design

- Business case for alternatives assessment
- Alternatives assessment as a tool for continual improvement toward the use of greener chemicals
- Integrating life-cycle thinking into alternatives assessment via Cradle-to-Cradle design

**Lauren Heine, Principal, LAUREN HEINE GROUP and Science Director at CLEAN PRODUCTION ACTION**

### Biogas to Bioplastic (and Back Again)

- Aerobic PHB production from methane
- Anaerobic biodegradation of PHB to methane
- Selection of Type II methanotrophs
- High throughput media optimization
- Strategies for scale-up

**Professor Craig Criddle, Environmental Engineering & Science (EES) Senior Fellow, Woods Institute for the Environment, STANFORD UNIVERSITY**

Joint Q&A with all the speakers from the session

8:10am - 10:00am

10:00am NETWORKING BREAK

### Lessons from Europe

The European market for biopolymers is increasing at a rapid rate with retailers and governments recognizing the performance benefits arising from bio-based materials, and in particular in end-of-life management options. Furthermore, the Lead Market Initiative provides, at the strategic level, a platform for fast-track market development for biopolymers in the European Union.

#### Opening remarks from the chair

**Andy Sweetman, Chairman of the Board, EUROPEAN BIOPLASTICS**

### An overview of bioplastics market development in Europe

- Europe: 1 view or 27?
- Biodegradable or bio-based? What's the driver?
- Bioplastics in packaging applications
- Bioplastics in non-packaging applications
- Challenges for the future

**Andy Sweetman, Chairman of the Board, EUROPEAN BIOPLASTICS**

### The Biorefinery 2nd Generation Mater-Bi, New Developments and Applications

- Higher renewable content, low levels of GHG emissions and less dependence on mineral oil feedstocks for a new range of Mater-Bi grades
- The Multilabel as a tool to communicate clear environmental information B2B and B2C
- Compostable bags and carrier bags: case histories from UE countries

**Marco Versari, Strategic Marketing Manager, NOVAMONT SPA**

### The Experience of Mater-bi Shopping Bags in Unicoop Firenze

- Consumption of plastic t-shirt bags
- Biodegradable mater-bi shopping bag project:
  - Our partners
  - The marketing plan and actions
  - The results
- What can we do for the future?

**Gianmario Peretti, Marketing Manager, UNICOOP FIRENZE**

### Expanding Biopolymer Markets through Expanded End of Life Options

- How biopolymers fit into emerging compost and anaerobic digestion infrastructure
- What makes a biopolymer compostable or digestible?
- How compatible are biopolymers with current infrastructure for composting and anaerobic digestion?
- What are the risks and benefits of introducing biopolymers into this infrastructure?
- What is the EU experience and how will this evolve in the US?

**Bruno de Wilde and Norma McDonald, North America Sales Manager, ORGANIC WASTE SYSTEMS, INC.**

Joint Q&A with all the speakers from the session

10:30am - 12:00am

### Regulations and Metrics

This session will help you understand the legislative framework in which manufacturers of biopolymers and bio-based packaging must operate. Learn some of the methods for quantifying the sustainability of your polymer or packaging product.

#### Opening remarks from the chair

**Eric Koester, Attorney, COOLEY GODWARD KRONISH LLP**

#### Metrics Matter

- The need for packaging sustainability metrics
- The challenges of measuring packaging sustainability
- The SPC's Sustainable Packaging Indicators and Metrics framework
  - Development
  - Content
- Applying the framework to biopolymers - hypothetical example

**Katherine O'Dea, Senior Fellow, GREENBLUE / SUSTAINABLE PACKAGING COALITION**

#### Trends in Global Regulations

- While the U.S. may represent a significant market, it is not the only market
- How can producers identify and understand key regulations in the U.S., Europe, Asia as well as in developing markets.

**Eric Koester, Attorney, COOLEY GODWARD KRONISH LLP**

Joint Q&A with all the speakers from the session

12:00am - 12:50pm

12:50pm

LUNCH WILL BE SERVED FOR SPEAKERS AND ATTENDEES

## ROOM 1

### Waste Stream, Recycling and End of Life

Biopolymers and bio-based plastics may be subject to a wide range of diverse end-of-life management options. See how biopolymers fit into the waste hierarchy and provide a great opportunity to assist in waste management.

### Opening remarks by the chair

**John Williams, Polymers & Materials Manager, NATIONAL NON FOOD CROPS CENTRE, YORK**

### Why Use Biopolymers in the European Market?

- Fossil economy v Bio-economy
- Feedstock – security and sustainability
- Steps to functionality
- End of life advantages of bio-renewable polymers

**John Williams, Polymers & Materials Manager, NATIONAL NON FOOD CROPS CENTRE, YORK**

### Disposal Options for Biopolymers

- Composting
- Recycling
- Waste to energy
- Landfill

**Paul Comey, VP Environmental Affairs, GREEN MOUNTAIN COFFEE ROASTERS**

### Disposal, Recycling and Reuse of Biopolymers

- The patent perspective
- Patents for recycling biopolymers
- Patent analysis
- Prospects and limitations of recycling biopolymers
- New developments

**Michael Niaounakis, Principal Examiner, EUROPEAN PATENT OFFICE**

### When Our Trash Could Talk

- The miniaturization of computer technologies and the ubiquity of network connectivity open new opportunities for managing our urban infrastructure
- Objects can be located, availability of resources can be measured, and dynamic systems in the city can be analyzed and activated at an unprecedented scale.
- The change our cities undergo given this new condition.
- Trash Track: a set of smart tags were deployed on different types of trash, and followed through the city's waste management system to reveal the end-of-life journey of our everyday object

**Assaf Biderman, Associate Director, SENSEable City Laboratory, MIT**

### BioCor – The Business of PLA Recycling

- What is BioCor
- What does BioCor offer recyclers
- Business development approach & results

**Mike Centers, Managing Director, BIOCOR**

**Joint Q&A with all the speakers from the session**

## ROOM 2

### Technology Developments

The bio-plastics industry is young and dynamic. Hear about some of the latest technological developments from major multi-nationals that will extend the scope of use and drive market development.

### Opening remarks from the chair

**Dr. Ramani Narayan, MICHIGAN STATE UNIVERSITY**

### Material Performance through Sustainable Chemistry

#### - The DSM journey

- Renewable thermoplastics and thermosetting solutions
- Natural fibers for high-performance reinforcement materials
- Innovative bio-derived building blocks

**Marcel P. van Berkel, Business Discovery Director, DSM PERFORMANCE MATERIALS CLUSTER**

### BASF's Bioplastic Innovation for Packaging

- New biobased materials
- Technical requirements driving development in packaging
- Increasing biobased content with compostability - A key value driver

**Keith Edwards, North America Business Manager, Biodegradable Plastics Ecoflex® and Ecovio®, BASF Corporation**

### A View from the Front Lines

- Broadening Ingeo products & applications
- Globalizing the Ingeo manufacturing platform
- Monetizing the Ingeo cradle-to-cradle value proposition

**Steve Davies, Marketing Director, NATUREWORKS LLC**

**Joint Q&A with all the speakers from the session**

## 4:10pm NETWORKING BREAK

## ROOM 1

### Key Players in Bio-polyesters

In this session, leading manufacturers of bio-polyesters present latest developments in their product portfolios.

### Opening remarks from the chair

**Dr. Paul Fowler, Director, Welsh Institute for Natural Resources, BANGOR UNIVERSITY**

### Update on Mirel PHA

- New applications in Mirel
- Acceptance in market
- Global activity

**Robert Engle, General Manager**

**TELLES, a joint venture of Metabolix, Inc. and ADM**

### The Applications of Lactic Acid and Lactate Derivatives

- Non-toxic and environmentally friendly product
- Lactic acid can be further reacted to produce derivatives that include lactate salts, lactate esters and lactide
- Applications overviews: food and feed, cosmetics, detergents, oilfield and other industrial applications

**Edward Ludwig, Business Development Manager, Chemical and Pharma, PURAC**

### Bioplastics for Film Extrusion and Injection Molding

- Bio raw polymers
- Modifying of bio raw polymers and enhancing their properties
- Properties and processing of modified bioresins for film extrusion and injection molding

**Patrick Zimmerman, President, FKUR PLASTICS CORPORATION**

**Joint Q&A with all the speakers from the session**

## ROOM 2

### Green Marketing and Eco-labels

Clear, evidence-based marketing claims and labelling are critical to successful uptake and acceptance of biopolymers and bio-plastic products. This session will teach the ground rules to achieve success in this complex arena.

### Opening remarks from the chair

**Dr. Anastasia O'Rourke, Co-Founder, BIG ROOM INC.**

### Setting the Scene: The landscape of ecolabels, certifications and validations

- The current landscape of ecolabels as tracked by ecolabelling.org
- Gaps and possible sources of confusion
- Labels of relevance to biopolymers
- Best practices in ecolabel design marketing and use

**Dr. Anastasia O'Rourke, Co-Founder, BIG ROOM**

### Green Purchasing

- Drivers for buying green
- Approaches for defining green
- Obstacles to green purchasing

**Jim Darr, Chemist, Pollution Prevention Division, US EPA**

### Consumers and Certifications

- Confused, concerned or apathetic? What do consumers understand about ecolabels and certifications?
- What impact do certifications have on consumer buying behavior?
- How do awareness, understanding and behavior vary by LOHAS consumer segment?

**Steve French, CEO, NATURAL MARKETING INSTITUTE**

### Certification and Validation of Claims

- The credibility continuum: Validation, Verification and Certification of environmental claims. Use of ecolabels and certifications in international supply chains
- Requirements from institutional purchasers

**Speaker TBC**

**Joint Q&A with all the speakers from the session**

## 5:50pm NETWORKING RECEPTION AND POSTER SESSION

7:45am CONTINENTAL BREAKFAST

8:30am OPENING REMARKS BY THE CHAIRS

8:40am - 9:05am

**The Business of Bioplastics in the U.S.**

- Market overview and current status
  - Trends and challenges
  - Political framework
- Production, growth and future outlook

**Melissa Hockstad, Vice President, Material Suppliers Council, SPI**

**Innovations in Materials**

Biopolymer innovation is allowing companies to differentiate their products and brands in applications from micro-chips to multigrain-chips. Hear how brand leaders are using bio-based materials in successful and well-accepted applications.

**Opening remarks from the chair**

**Mark Bunger, Research Director, LUX RESEARCH**

**Innovations in Computing Materials and Energy Performance**

- Hazardous substance requirements
- Role of ENERGY STAR, EPEAT and EcoLabels
- Efforts in design for the environment
- Life cycle analysis in industry supply chains and reporting

**Kathleen Fiehrer, Program Manager Climate Savers Computer Initiative, Eco Technology Program Office, INTEL CORPORATION**

**PepsiCo Sustainability - PLA and Beyond**

- PepsiCo's sustainability journey
- Compostable Sunchips bags
- Vision going forward

**Deepali Palta, R&D Engineer, PEPSICO ADVANCED RESEARCH - FOOD PACKAGING**

**Topic TBA**

**Michael Maggio, VP Global Strategic Design Operations, JOHNSON & JOHNSON**

**Innovations in Materials: Strategies for Fruitful Corporate-startup Partnerships**

- Partnerships' role in accelerating biopolymer innovation, and examples of successful collaborations
- Shared views and opposing opinions on the criteria by which developers and corporations measure prospective partnerships
- Advantages and shortcomings of four different partnership strategies

**Mark Bunger, Research Director, LUX RESEARCH**

**Joint Q&A with all the speakers from the session**

9:05am - 10:35am

10:35am NETWORKING BREAK

**Developments in Packaging Applications**

Biopolymers are increasingly fulfilling more and more demanding packaging applications as barrier and mechanical properties are improved. This session will highlight developments by two of the world's leading brands.

**Opening remarks from the chair**  
**Scott Vitters, Global Director, Sustainable Packaging, THE COCA-COLA COMPANY**

**Topic TBA**

**Scott Vitters, Global Director, Sustainable Packaging, THE COCA-COLA COMPANY**

**Packaging for the Automotive Industry and the Potential of Bioplastics**

- Current automotive returnable packaging system
- Possible automotive applications of bioplastics
- Advantages and sustainability
- Feasibility and challenges

**Camille Chism, GLOBAL ENGINE MANUFACTURING ALLIANCE, CHRYSLER GROUP LLC**

**Joint Q&A with all the speakers from the session**

11:00am - 12:30pm

12:30pm LUNCH

## Biopolymers Symposium 2010 Poster Session

For the first time, the Biopolymers Symposium will feature a poster session, taking place at the beginning of the networking reception on the afternoon of October 12th.

**To participate in the poster session:**

Please send a one page abstract to Barbara Rojas at [barbara.rojas@pira-international.com](mailto:barbara.rojas@pira-international.com) for review. The abstracts should be on the topics of technology developments, research of new materials, feedstock, end of life solutions, new applications, etc.

After your abstract has been accepted, you will need to register to attend the symposium to be able to participate in the poster session:

**Price for industry: \$1699**

*(including 2 day symposium and poster session)*

**Price for academia and non profits: \$899**

*(including 2 day symposium and poster session)*

Workshop and seminars are separate.

**The deadline to submit abstracts is July 30th, 2010.**

**We look forward to seeing your submissions!**

## Keep up with the latest developments at [biopolymersummit.com](http://biopolymersummit.com)

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## Biopolymers Symposium Speaker and Company Profiles

Click here to download the Biopolymers Symposium supplemental pdf, featuring speaker bios and profiles of presenting companies and media partners.



ROOM 1

**Consumer Applications**

Bio-based plastics have applications in more than packaging. Increasingly manufacturers of durable consumer goods are recognizing the performance and environmental benefits afforded by bio-based polymers. This session provides an insight into some of those applications.

**Opening remarks from the chair**

**Derek Campbell, Manager of Future Concepts, BROOKS SPORTS**

**Topic TBA**

**Derek Campbell, Manager of Future Concepts, BROOKS SPORTS**

**Topic TBA**

**MERQUINSA**

**The Application of Bioplastics in Automobile Industries in Japan**

- Performance improvement of the bioplastics
- Broad material utilization
- Future prospects of the industry

**Isao Inomata, Adviser, JAPAN BIOPLASTICS ASSOCIATION**

**Joint Q&A with all the speakers from the session**

1:45pm - 3:15pm

ROOM 2

**US Market Overview**

This session reviews developments in the US addressing aspects such as market trends, future areas for growth and the pitfalls of green-washing.

**Opening remarks from the chair**

**Corey Linden, Research Scientist, BATTELLE**

**U.S. Biodegradable Polymers Market and the Chemical Industry's Point of View**

- U.S. biodegradable polymers market landscape and forces at work
- Major product end uses and future growth
- Perspective and insight from the chemical industry

**Michael Malveda, Consultant, SRI Consulting**

**Green Plastics and White Lies - An Honest Assessment**

- Recognizing common fantasies and frauds of startups and scams
- The present and future of "green-collar" crime
- The strategic advantage of straight talk

**Erik Hoover, Analyst, CLEANTECH DATA**

**Value Added Products from Biobased Starting Points**

- Battelle's history converting biobased materials to products
- Our approach
- Recent work and developments

**Corey Linden, Research Scientist, BATTELLE**

**Joint Q&A with all the speakers from the session**

ROOM 1

**Developments on Existing and Emerging Feedstocks**

Common to all biopolymers and bio-based applications is a feedstock arising from nature. Concerns over the use of food materials for the production of industrial materials are driving manufacturers to seek out alternative sources.

**Opening remarks from the chair**

**Jim Kleinschmit, Rural Communities Program Director, IATP**

**Sustainable at the Source: Sustainability Concerns and Options for Biopolymer Feedstocks**

- Identify key sustainability concerns with existing and emerging feedstocks
- Discuss current and developing sustainability initiatives for biomass and biopolymers
- Present key opportunities for biopolymer support of sustainable feedstock options

**Jim Kleinschmit, Rural Communities Program Director, IATP**

**Industrial Customers Meet the World of Agriculture**

- History of biobased product offering
- Evolution of biobased feedstock
- Successful examples and future expectations

**Akin Ozkutan, CARGILL**

**Joint Q&A with all the speakers from the session**

3:45pm - 4:55pm

ROOM 2

**Facilitating Markets for Bio-based Materials**

The BioPreferred incentive program is facilitating market uptake of bio-based materials. Learn about the program and hear how one company is using it in the development of greener building products.

**Opening remarks from the chair**

**Kate Lewis, Deputy Program Manager, BIOPREFERRED**

**Advancing the Market for Biobased Products Via Regulation and Voluntarily: Report on the Latest BioPreferredSM Program Developments**

- The status of program "designations" (regulations) for identifying additional finished biobased products for purchase by the Federal Government;
- The program's voluntary product label for use by members of the biobased industry value chain;
- Plans the program has to environmentally assess biobased products in the future, and integrate intermediate ingredients/feedstocks and more complex products into its designation and labeling program.

**Kate Lewis, Deputy Program Manager, USDA BioPreferred Program**

**Moving BioPreferredSM Products through the Value Chain for Green Buildings**

- The value chain for producing new bio-based thermoset composite building products using resin intermediates made with biorenewable raw materials
- Resin intermediates are unsaturated polyester resins that have been made using soybean oil, corn-derived ethanol and/or other chemical building blocks obtained from biomass.
- Building products include countertops, tubs and showers, and restaurant furniture

**Dr. Joseph Fox, Director, Emerging & External Technologies, ASHLAND INC**

**Joint Q&A with all the speakers from the session**

3:15pm NETWORKING BREAK

**You may be interested in the following reports from IntertechPira**

Biopolymers in Packaging Applications

Processing Biopolymers

Value-added Chemicals from Biomass

*(click the titles for more information)*



4:55pm END OF CONFERENCE

**PLEASE NOTE**

**Symposium Agenda is subject to change. Check biopolymersummit.com for updates!**





**e - Learning**

Moderator:

Chandra Guyot  
Head, e-Learning  
Pira International  
[www.intertechpira.com](http://www.intertechpira.com)





Chandra.Guyot@pira-international.com  
207-781-9602

**IntertechPira Webinar**

Industrial Biotechnology - A Global Market Outlook

Enjoy the possibilities of a new kind of beauty.



Ingeo - Fantastic Natural Plastic



Sunchips - Biodegradable Packaging

## Branding Sponsorship Opportunities

### All sponsorships include:

- Exhibit table in the exhibit area
- Your logo on the Biopolymers Symposium 2010 webpage with a link to your website
- Two mentions of sponsorship from the podium at the event
- Complete attendee list provided before and after the conference
- Your name in all promotional materials including the conference brochure
- Company description in conference proceedings (1/2 page)
- Two Guest Passes to the exhibit area

### Travel & Event Carbon Offset Sponsorship

**\$4,000**

*(One available)*

Your company's logo will be featured on message board placed near entrance of conference room

- One registration to the conference

### Biodegradable Pens Sponsorship

**\$4,000**

*(One available)*

Your company's logo will be featured on the conference pens distributed at the opening of the conference

- One registration to the conference

### Recycled Paper Padfolio Sponsorship

**\$5,000**

*(One available)*

Your company's logo will be featured on the cover of recycled paper conference pads distributed during the plenary session at the opening of the conference

- One registration to the conference

### Poster Session Sponsorship

**\$5,000**

*(One available)*

Your company's logo will be featured on message board placed near the poster session display

- One registration to the conference

### Bamboo Lanyards Sponsorship

**\$5,000**

*(One available)*

Your company's logo will be featured on conference lanyards distributed during registration

- One registration to the conference

## Exhibitor Opportunities

**Tier 1: \$3500** Includes table top, 1 pass to the symposium, 1 pass to workshop OR 1 pass to 2 seminars and 1 guest pass to exhibit hall

**Tier 2: \$2500** Includes table top, 1 pass to the symposium, and 1 guest pass to exhibit hall

**Tier 3: \$1500** Includes table top and 1 guest pass to exhibit hall

### Didn't find the sponsorship package you were looking for?

We can customize the options to suit your objectives and budget. Contact Brian Santos at +1 207 781 9618 or [brian.santos@pira-international.com](mailto:brian.santos@pira-international.com) for more information.

### Travel Coffee Mugs Sponsorship

**\$5,000**

*(One available)*

Your company's logo will be featured on conference travel coffee mugs distributed during registration

- One registration to the conference

### Tote bags Sponsorship

**\$5,000**

*(One available)*

Your company's logo will be featured on conference tote bags distributed during registration

- One registration to the conference

### iPad/Kindle Giveaway Sponsorship

**\$5,000**

*(One available)*

A person from your company will present the lucky winner with an iPad or Kindle at the end of the conference

- One registration to the conference

### USB/Workbook/Post-conference Link

**\$7,000**

*(One available)*

Your company's logo will be featured on the USB Drive proceedings, the front cover of the hardcopy workbook proceedings and a banner ad on the post-conference link distributed to all participants during the registration and after the conference has concluded.

- One registration to the conference.

## Function Sponsorship Opportunities

### All sponsorships include:

- Exhibit table in the exhibit area
- Your logo on the Biopolymers Symposium 2010 webpage with a link to your website
- Two mentions of sponsorship from the podium at the event
- Complete attendee list provided before and after the conference
- Your name in all promotional materials including the conference brochure
- Company description in conference proceedings (1/2 page)
- Two Guest Passes to the exhibit area

### Continental Breakfast Sponsorship *(One available)*

**\$3,500**

*Tuesday, October 12, 2010 AND Wednesday, October 13, 2010*

• Exclusive sponsorship of Day 1 and Day 2 continental breakfast

- One registration to the conference
- Prominent signage with sponsor logo promoting your sponsored event
- Logo on beverage napkins

### Refreshment Break Sponsorship *(Two available)*

**\$4,000**

*Tuesday, October 12, 2010, Wednesday, October 13, 2010*

• Exclusive sponsorship of Day 1 or Day 2 refreshment breaks

- One registration to the conference
- Prominent signage with sponsor logo promoting your sponsored event
- Logo on beverage napkins

### Roundtable Luncheon Sponsorship *(Two available)*

**\$5,000**

*Tuesday, October 12, 2010, Wednesday, October 13, 2010*

• Exclusive sponsorship of the three-course Roundtable Luncheon on Day 1 or Day 2

- One registration to the conference
- Listed as Luncheon sponsor on all promotional material
- Prominent signage with sponsor name/logo promoting your sponsored event
- Table tent card with logo placed on the tables

### Reception Host Sponsorship *(One available)*

**\$6,000**

*Tuesday, October 12, 2010*

• Exclusive sponsorship of Evening Networking Reception

- One registration to the conference
- Prominent signage with sponsor name/logo promoting your sponsored event
- Full-page company profile in conference proceedings (1 page)
- Logo on beverage napkins

### Stage Sponsorship *(Two available)*

**\$7,500**

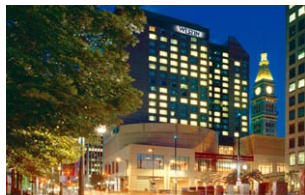
*Tuesday, October 12, 2010, Wednesday, October 13, 2010*

• Logo featured prominently on the stage for plenary and concurrent sessions

- One registration to the conference
- Full-page company profile in the conference proceedings (1 page)

## The venue

Awarded Colorado's first "Green Hotel" designation, the Four Diamond Westin Tabor Center boasts 24-hour room service, New York-based steakhouse The Palm, a WestinWORKOUT® Gym, and a roof deck pool with stunning mountain views. Located in renowned Lower Downtown Denver, the hotel is a stroll away from the 16th Street pedestrian mall, Denver Center for Performing Arts, Convention Center, museums, professional sports venues and entertainment. The guest rooms, newly renovated in March 2009, include 15 suites and offer views of the city and mountains from 19 floors, 37" flat-screen LCD TVs, iPod and laptop interfacing capabilities, and signature style featuring the Westin Heavenly Bed®.



**Venue address:**  
**The Westin Tabor Center**  
 1672 Lawrence Street,  
 Denver, Colorado, US 80202  
 Tel: +1 303 572 9100

## Accommodation

Speakers and delegates are responsible for booking their own travel and accommodation. A limited number of rooms have been reserved for speakers and delegates of the **Biopolymers Symposium 2010** at a special rate of **\$159.00 plus tax**. To take advantage of this special rate you must book your room before **Sunday, September 17, 2010** and mention that you are attending **IntertechPira's Biopolymer Symposium 2010**.

## Conference fees

The conference fee includes entry to the conference sessions and the exhibition, conference proceedings CD, luncheons, receptions and refreshments. However, fees do not include delegate travel and accommodation. All credit card orders are processed at that day's E/€//\$ exchange rate at the time the transaction goes through. **PLEASE NOTE:** *In order to receive the discounted price, Early Bird registration fees must be paid at time of purchase. If you have any questions regarding this policy, please contact John Buss at +1 202 309 7296 or john.buss@pira-international.com.*

## Cancellations

Cancellations will be accepted and fees will be refunded (less 20% handling charge) only if made in writing and received ten working days before the event. Bookings cannot be cancelled or fees refunded thereafter. Substitutions may be made at any time, please notify John Buss at john.buss@pira-international.com or +1 202 309 7296.

## Note

IntertechPira does not accept liability for any loss of or damage to the personal effects of delegates attending the conference. IntertechPira reserves the right to cancel, defer or modify the event proceedings without prior notice. If you have sent a booking to us and have not received confirmation, please contact Laura Preston at laura.preston@pira-international.com or +1 207 781 9613.

## Visas

Delegates requiring visas should request a visa invitation letter from IntertechPira at the time of registering for the event, ensuring sufficient time is left for applications to be completed. Delegates are then responsible for contacting the relevant/appropriate embassy themselves. IntertechPira can do nothing further to assist in this process.

**Any questions about the information above, please contact Laura Preston at laura.preston@pira-international.com or +1 207 781 9613.**

## Your event organizer

IntertechPira provides events, market research, publications, strategic and technical consulting to niche, emerging and high growth industries. Market coverage includes lighting and displays, alternative energy, home and personal care, industrial biotechnology, performance materials and chemicals. IntertechPira is a division of Pira International. Visit [www.intertechpira.com](http://www.intertechpira.com) for more information.

## For further information on the conference please contact:

### Registration and Membership Inquiries:

John Buss/T: +1 202 309 7296  
 E: john.buss@pira-international.com

### Exhibition and Sponsorship:

Brian Santos/T: +1 207 781 9618  
 E: brian.santos@pira-international.com

### Conference Producer:

Barbara Rojas/T: +1 207 781 9608  
 E: barbara.rojas@pira-international.com

### Logistics inquiries:

Laura Preston/ T: 207 781 9613  
 E: laura.preston@pira-international.com

### Marketing and Press:

Danielle Marks/T: +1 207 781 9637  
 E: danielle.marks@pira-international.com

## CONFERENCE PRICING

<b>Early Bird (10% off until Sept. 3rd)</b>	<b>\$1,439</b>
<b>Super Early Bird (20% off until July 30th)</b>	<b>\$1,299</b>
<b>Regular Conference fee (until Oct 8th)</b>	<b>\$1599</b>
<b>On-site Conference Registration</b>	<b>\$1649</b>

<b>Tier 1 Exhibit</b>	<b>\$3500</b>
<b>Tier 2 Exhibit</b>	<b>\$2500</b>
<b>Tier 3 Exhibit</b>	<b>\$1500</b>

<b>Workshop #1 Full Day - Dr Narayan</b>	<b>\$799</b>
<b>Seminar 1 Lin Kaatz Chary</b>	<b>\$399</b>
<b>Seminar 2 Paul Fowler</b>	<b>\$399</b>
<b>Seminar 3 Edwin Tam</b>	<b>\$399</b>

<b>Conference and workshop 1</b>	<b>\$1,999</b>
<b>Conference and 1 seminar</b>	<b>\$1,799</b>
<b>Conference and 2 seminars</b>	<b>\$1,999</b>
<b>Conference and 3 seminars</b>	<b>\$2,299</b>

<b>Exhibit hall pass with food</b>	<b>\$169</b>
<i>There will be no free exhibit passes</i>	

<b>Poster session</b> with symposium included for Industry	<b>\$1,699</b>
<b>Poster session</b> with symposium included for academia	<b>\$899</b>

## Exhibition opportunities

IntertechPira's **Biopolymer Summit 2010** offers a unique opportunity to showcase your products and services all while accessing the leaders in this industry. Depending on your goals and the level of sponsorship, a benefits package can be designed to target a narrow audience or a broad group and may include event recognition as well as publicity, marketing, promotional opportunities and complimentary event passes. For more information on our many exhibition opportunities that meet your business goals, please contact Brian Santos at:

**brian.santos@pira-international.com or +1 207 781 9618**