

SPE BIOPLASTICS SIG

April Newsletter, 2017



CHAIR'S COMMENTS

Hello everyone! Hopefully everybody is enjoying spring time. In the Bioplastic SIG, we are getting ready for ANTEC 2017 which will be held in Anaheim, CA. I want to encourage everybody to attend this conference. It helps to continue learning of new technologies related to our industries and also allows you to connect with new professionals as well as reconnecting with old friends. Also it's a chance to get away from the office or plant and refresh yourself.

We are really excited to tell everybody that the Bioplastic SIG is becoming division. Thanks for voting in favor of that and for all of the support you have provided to this SIG in the past.

We are holding our board meeting on Monday, May 8th at 1:30 pm to 2 pm. Though its closed door please stop by before or after the meeting to see any board member if you have any questions or want to provide new information for the upcoming planning sessions. I would encourage you to volunteer to work on the board.

Hope to see you all at ANTEC!!

Abhishek Ambekar

ANTEC® Anaheim 2017 - Bioplastics Agenda

The Bioplastics Special Interest Group welcomes an exciting group of speakers and papers for ANTEC® 2017 in Anaheim, California. The current schedule of speakers is below.

Monday, May 8th

Session Time:	Monday Morning: Biodegradable Polymers and Blends	
	Moderator: Meg Sobkowicz	
	Title	Author
8:00 – 9:00	Keynote, Title TBD	John Dorgan, Michigan State University
9:00	Biodegradability of PLA in compost environment	Qi-Hong Liao, National Taiwan University of Science and Technology
9:30	Biopolymer Compounds for Applications Requiring Marine Degradation	Mustafa Cuneyt Coskun, Mercer University
10:00	Degradation of PBSA in Water	Douglas Hirt, Clemson University
10:30	Blends of poly(propylene carbonate)/hydrogenated nitrile butadiene rubber: Morphology and thermal properties	Ahmad Zohre vand, University of Montreal
11:00	PHA and PLA Biodegradable Plastics with Rice Straw Filler to Create Biobased Structural Insulating Panels (BSIPs)	Joseph Greene, Chico State University

Board Meeting: 1:30 – 2:00p, Manhattan Room

Session Time:	Monday afternoon: Processing of Bioplastics	
	Moderators: David Grewell and Doug Hirt	
	Title	Author
2:00	Effect of acrylic core-shell impact modifier on processing and thermo-mechanical properties of stereocomplex poly(lactic acid)	Jacek Lecinski, Hochschule Hannover
2:30	Modified Polylactide With Improved Thermal and Rheological Properties for Foaming	Svenja Gottermann, IKT Stuttgart
3:00	Influence of High-Speed Extrusion on Structure and Properties of Bioplastics Blends	Margaret Sobkowicz, UMass Lowell
3:30	Welding of PLA	David Grewell, Iowa State University

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Tuesday, May 9th

Session Time:	Tuesday Morning: Bioplastics for Medical and Novel Applications	
	Moderator: Stephan Laske	
	Title	Author
8:30	Preparation of three-dimensional poly(e-caprolactone) porous tissue engineering scaffolds by a combination of microcellular injection foaming and polymer leaching	An Huang, University of Wisconsin
9:00	Induction of mesenchymal stem cells (MSC) differentiation to endothelial cells via scaffold stiffness modulation	Yong-Chao Jiang, Zhengzhou University
9:30	Self-assembled protein-rubber nanocomposites	Barbara DeButts, Virginia Tech
10:00	Microencapsulation of Pamitic Acid With Polylactic Acid Shell for Thermal Energy Storage	Maryam Fashandi, York University

Be sure to register early for ANTEC® Anaheim. Information on the conference and registration, go to: <https://www.eiseverywhere.com/ehome/184555>.



MEET OUR 2017 ANTEC® BIOPLASTICS KEYNOTE

Professor John Dorgan is the David L. and Denise M. Lamp Endowed Chair in Chemical Engineering at Michigan State University as of January 2017. He previously served as a professor at the Colorado School of Mines for 23 years and has a background and heavy research focus in polymer science.

Professor Dorgan's research focuses on "Green" polymers made from renewable resources. Recently, he began working with the National Renewable Energy Laboratory on renewable routes to carbon fibers. Such fibers are critical to lightweight vehicles and advanced wind turbines, among other

Within the very real constraints of thermodynamics, transport processes, and economics he seeks to enhance the sustainability of industrial systems.

Professor Dorgan also has a deep intellectual interest in fundamental polymer materials science with an emphasis on rheology and morphology. Structure-property relationships in blends, composites, nanocomposites, and supramolecular systems are investigated in his research group. He presently has funding to develop specialized molecular simulations of polymers under flow conditions and to develop new bioplastics. He also works in multicomponent mass transfer in crosslinked polymer materials.



BIOPLASTICS SPOTLIGHT: IM Polymer GmbH

The IM Polymer GmbH, headquartered in Leoben, Austria, consults with a wide network of academic and industrial partners on sustainable polymer engineering, from establishing green product lines to complete product launches. The novelty of IM Polymer is bridging the gap between material scientists and manufacturers to the users of green products. With a holistic approach from the material to design and application, IM Polymer enables products to enter the market successfully. Examples are compostable labels, pouches, sachets, coffee capsules and forest protection products based on 100% renewable materials.

IM Polymer and its highly experienced employees cover material (e.g. green PVOH, PEF or PBS), process (e.g. process design and optimization of extrusion or injection molding lines) and design related tasks as well as customer communication. There is no green polymer related question it has not dealt with in the last decade. IM Polymer offers market research; material, process and product development; and design and LCAs from sketch to prototype. IM Polymer's customers range from packaging manufacturers to retailers along the value chain.

For more information, visit www.impolymer.at.



BREAKING NEWS

BIOPLASTICS SIG: NEWS

Bioplastics SIG up for Division in Formation

Thanks to your votes, in March 2017, the Bioplastics SIG's move to become a Division-In-Formation was realized. We are excited to move forward in this process for the Bioplastics SIG community! Stay tuned as this process unfolds.

Call for Newsletter Articles

You may have noticed articles in the last couple of newsletters highlighting the work of groups and organizations in the Bioplastics SIG.

The newsletter is an opportunity to showcase the efforts and achievements of your group or organization among your Bioplastics SIG peers, and foster future collaborations. We welcome the opportunity to showcase your group or organization, as well!

Send a short write-up (1 page or less) on your group or organization's efforts to kalstovall@gmail.com for inclusion in a future newsletter.



OUR MISSION

The mission of the BioSIG is “To provide a unified forum for promoting open exchange of scientific and engineering knowledge related to bioplastics materials that are either biobased, biodegradable, or both with a sustainability emphasis.”

Areas of interest include synthesis, characterization, processing, structure-property relationships, degradation, product design and development, application development, modeling, regulations and compliance, and life-cycle analyses. To achieve its objectives, the SIG collaborates closely with other interested technical divisions of SPE and organizations to coordinate the dissemination of knowledge and understanding of bioplastics through appropriate channels.



MEET YOUR BOARD

These are the working members of your Board of Directors and bring a strong commitment and knowledge in guiding our SIG into the future.

Chair

Abhishek Ambekar

Ph.D., Research Engineer, Solvay

Vice Chair & Technical Program Chair

Margaret Sobkowicz-Kline

Ph.D., Plastics Engineering Assistant Professor, University of Massachusetts Lowell

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Frank Popola

Principal, Process Solutions Group, LLC

Stephan Laske

Assoc.-Prof. Dr., Head of R&D at Saubermacher AG,
CEO at IM Polymer GmbH

Srikanth Pilla

Ph.D., Assistant Professor, Clemson University

GET CONNECTED

Connect with others in Bioplastics through LinkedIn:

<https://www.linkedin.com/groups/7050139>

Keep up with the latest happenings with the Bioplastics SIG:

<http://www.4spe.org/bioplasticsSIG>