



Hosted by SPE's Bioplastics SIG and Upper Midwest Section

**TUTORIAL (*Room: Chadwick*)
Tuesday April 19**

8:30 – noon

Part 1: Bioplastic Materials: Overview - Edwin Tam, Teknor Apex Company

1. Classes of Biopolymers/Bioplastics
2. Chemistry
3. Typical Properties
4. Typical Markets & Applications

Noon – 1:30 pm Lunch (*Baliff/Chadwick Foyer*)

1:30 – 5:00 pm

Part 2: Sustainability Overview - Dr. Kelvin T. Okamoto

1. Terminology and Definitions
2. Life Cycle Analysis
3. Regulations
4. Testing

*****Coffee breaks provided***

CONFERENCE PROGRAM (Room: Bloomington I & II)

April 20-21

Wednesday, April 20

7:30 - 8:30 am	Breakfast (<i>Garden Court South</i>)
8:30 - 8:40 am	Bioplastics TOPCON Chair: Welcome & Housekeeping <i>Edwin Tam, Manager, Marketing and Business Development, Teknor Apex</i>
8:40 - 9:10 am	Functional Aliphatic Polyesters from Renewable Resources <i>Debbie Schneiderman, Ph.D Candidate, University of Minnesota</i>
9:10 - 9:40 am	Synthesis of Biobased Poly(butylene-co-hexane succinate) for Coating Applications <i>Margarent Sobkowicz Kline, UMass-Lowell</i>
9:40 - 10:10 am	PBSA: Strengths and Weaknesses <i>Doug Hirt, Professor, Clemson University</i>
10:10 - 10:30 am	Break, Tabletop & Networking (<i>Ballroom Foyer and Garden Court South</i>)
10:30 - 11:00 am	Improving Thermal Stability in Biobased Additives for Polymer Compounds <i>Bob Montgomery, VP Sales & Product Development, Genarex</i>
11:00 - noon	Key Note Speaker: Understanding biodegradability – the science, the standards, the hype & misuse and true value proposition Ramani Narayan, Distinguished Professor, Michigan State University
12:00 - 1:30 pm	Lunch, Tabletop & Networking (<i>Ballroom Foyer and Garden Court South</i>)
1:30 - 2:00 pm	Biodegradable Polyester Ecoflex & Ecovio [More Info] <i>Thomas Pitz, BASF</i>
2:00 - 2:30 pm	A New Technique to Benchmark Performance of PLA Cutlery <i>Michael Annan, NTIC</i> <i>Shilpa Manjure, Manager, Product Development, NTIC</i>
2:30 - 3:00 pm	Properties and Applications for Expanded PLA (Polylactic Acid) Particle Foam <i>Steve Sopher, Technical Director, JSP</i>
3:00 - 3:30 pm	Break, Tabletop Display & Networking
3:30 - 4:00 pm	A "Green" Thermoset Versus Polylactic Acids <i>Wei Zheng, University of Wisconsin-Stout</i>
4:00 - 4:30 pm	Melting Efficiency Performance for Various Polylactide Resins in a Co-rotating Intermeshing Twin Screw Extruder : <i>Augie Machado, Laboratory Manager, Leistritz</i>
4:30 - 5:00 pm	3 Dimensional Mixing An Orderly Mixer For Single Screw Compounding <i>Keith Luker, President, Randcastle Extrusion Systems</i>

RECEPTION AND POSTER SESSION (*Garden Court South*)

5:30 pm - 7:30 pm

Compost Disintegration of Biodegradable Polymers for Packaging Applications
Samaneh Ashtiyani, Ph.D Student, Research Assistant, Michigan State University

Synthesis of biobased polyols from soymeal and its application in polyurethane rigid foam
Sayli Bote, Ph.D. Student-Chemical Engineering, Michigan State University

Novel Silk Fibroin Scaffold for bone graft applications
Prachi Dhavale, UMass-Lowell

Structure-Property Relationships of Modified Polylactic Compounds
Preetam Giri, PhD Student - Chemical Engineering, Michigan State University

Design and Synthesis of Polydimethylsiloxane Polyester Polyol that Contains Biobased Content for Polyurethane Foam Applications
Hugh MacDowell, Masters Student- Chemical Engineering, Michigan State University

Novel biobased elastomers by reactive blending of modified natural oil and polysiloxanes
Chetan Tambe, Graduate Student, Michigan State University

Thursday, April 21

8:20 - 8:30 am	Opening Remarks & Housekeeping Edwin Tam, Manager, Marketing and Business Development, Teknor Apex
8:30 - 9:00 am	3D Printing Natural Fiber Filled PolyOlefin's Robert Joyce, Owner and Founder, Innovative Plastics & Molding
9:00 - 9:30 am	Optimization of Bio-Based Filament: Innovative Materials for Fused Filament Fabrication Additive Manufacturing Bryan Zahner, Materials Engineer, Essentium Materials
9:30 - 10:00 am	3D Printing & Coloring PLA: Compounder Perspective Edwin Tam, Manager, Marketing and Business Development, Teknor Apex
10:00 - 11:00 am	Key Note Speaker: 3D Printing Polylactic Acid (PLA) Dan Sawyer, NatureWorks Llc.
11:00 - 11:30 am	Break, Tabletop & Networking (<i>Ballroom Foyer and Garden Court South</i>)
11:30 - 12:00 pm	ASTM D20 Committee Bioplastics & Biodegradable Update Kelvin Okamoto, President, Green Bottom Line
12:00 - 12:30 pm	New Barrier Layers for Biocompostable Films and Laminates Section – Compostable plastics Itai Pelled, R&D Director
12:30 - 1:30 pm	Lunch, Tabletop & Networking (<i>Ballroom Foyer and Garden Court South</i>)
1:30 - 2:00 pm	Interfacial Healing of PLA David Grewell, Iowa State University
2:00 - 2:30 pm	Naturally Occurring PHA Biopolymer from Bio-Methane: Commercial Update Andrew Cal, Mango Materials
2:30 - 3:00 pm	Product Development for Plant-based Polymers Danny Mishek, President and Founder, Self Eco
3:00 - 3:10 pm	Closing Remarks Edwin Tam, Manager, Marketing and Business Development, Teknor Apex

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