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## **Workshop on Innovation in Lignocellulosic Materials**

Friday, December 13 at 7:30AM

Institute of Paper Science and Technology, Georgia Tech

500 10<sup>th</sup> Street, NW, Room 114

Atlanta, GA 30332

Organizers: Art Ragauskas and Preet Singh

Sponsors: Norman Marsolan (IPST), David McDowell (IMat), Ben Wang (GTMI)

7:30 AM

Continental breakfast

8:00 AM

Welcome and overview of IMat - David McDowell (ME, MSE)

8:15 AM

Georgia Tech and lignocellulosic research: a survey of current activities – Norman Marsolan (ChBE, IPST)

8:30 AM

Overview Presentations by Invited Speakers (10 min each + 5 min Q&A)

Challenges, Gaps, Opportunities, and Capabilities for Lignocellulosic Research

- Bioenergy – Forest Biorefining for Energy - Dr. Art Ragauskas
- Chemicals – Building Block Chemicals from Lignocellulosic Biomass - Dr. Chris Jones
- Materials – The Use of Cellulose Nanomaterials in Polymer Matrix Composites - Dr. Meisha Shofner

9:15 AM

Short Presentations (5 min each + 5 min Q&A)

- Dr. Rosario Gerhardt
- Origins of Auxetic Behavior in Paper – Dr. Anselm Griffin
- Control of Cellulose Wetting by Plasma Surface Modification - Dr. Dennis W. Hess and Dr. Victor Breedveld
- Spectroscopic Studies on the Surface Reactions of Biomass-Derived Oxygenates – Dr. Carsten Sievers
- Optical, Thermal, and Mechanical Property Characterization of Nanocellulose-Thermoset Composites - Dr. Natalie Girouard (Dr. Carson Meredith)
- Cellulose Nanomaterials: unique properties and broad applications – Dr. Yulin Deng
- Cellulose Nanomaterials: Opportunities in Composite Design – Dr. Robert Moon
- Membranes and Adsorbents for Liquid Separations – Dr. Sankar Nair
- Effect of pyrolysis conditions on the gasification reactivity of biomass char – Dr. Pradeep Agrawal
- Organic electronics on cellulose nanocrystal films - Dr. Canek Fuentes Hernandez
- Corrosion issues in Biorefineries - Dr. Preet M. Singh

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10:30 AM

Break

11:00 AM: Discussion with Speaker Panel

Example Topics:

*Where are the gaps and the strengths?*

*What opportunities may exist for doing something new?*

*Who are our competitors?*

*What are potential teaming arrangements?*

*Possible pathways?*

*Multi-industry workshop objectives and participants in 2014?*

12:00 PM

Lunch provided