

# **THE WATERBORNE SYMPOSIUM**

## **Advances in Sustainable Coatings Technology**

**February 8 – 12, 2010**

### **Sponsored by**

School of Polymers and High Performance Materials at  
The University of Southern Mississippi and  
Southern Society for Coatings Technology

The Symposium consists of topical sessions of a broad range of issues within contemporary coatings science and technology to include (1) Waterborne, high-solids, powder, and radiation-curable coating systems, (2) Stimuli-responsive and “smart” coating systems, (3) Renewable raw materials for coatings, and (4) High-throughput methodologies for formulation. Registration for the Symposium includes admission to the technical sessions, Technology Showcase, Student Posters, and a copy of the Proceedings.

### **2010 SCHEDULE**

#### **Short Course – Reformulating to Waterborne Coatings**

February 8 – 9 (Monday – Tuesday)

#### **Workshop – Polymer Composite Matrix Science Workshop**

February 8 – 9 (Monday – Tuesday)

#### **TECHNOLOGY SHOWCASE**

February 9 – 12 (Tuesday – Friday)

#### **TECHNICAL SESSIONS**

February 10 – 12 (Wednesday – Friday)

#### **Student Posters**

February 10 – 12 (Wednesday – Friday)

#### **AWARD Presentations**

February 12 (Friday)

**New Host Hotel: Astor Crowne Plaza - 739 Canal Street – New Orleans, LA USA**  
**Call 888-696-4806 for discounted room rate!**

***For details, please visit our website: [www.psrc.usm.edu/waterborne](http://www.psrc.usm.edu/waterborne)***

For additional information, please contact: Waterborne Coordinator, Laura M. Fosselman

Voice: (601)266-4475 / 6298 Email: [waterborne@usm.edu](mailto:waterborne@usm.edu)

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**Preliminary Technical Sessions**

**“Sustainability, Today and Tomorrow”**

**Plenary Speaker.** Diana Strongosky  
VP of Research & Development, Paint & Coatings Division  
Sherwin Williams

**“Harnessing Surface Wrinkling to Measure the Viscoelastic Properties of Polymer Films and Coatings”**

Edwin P. Chan and Christopher M. Stafford  
Polymers Division, National Institute of Standards and Technology

**“Sweet Soy-based UV Curable Coatings”**

Zhigang Chen, Jennifer F. Wu, Shashi Fernando, and Katie Jagodzinski  
Center for Nanoscale Science and Engineering, North Dakota State University

**“Going “Green” with Primers: A Study to Provide a Better Alternative to Chrome”**

Rebecca Daley and Steve Hodges, Nubiola USA

**“Sucrose Ester Oil Modified Long Oil Alkyd Emulsions”**

Delano Eslinger and Tim Julien  
CCP

**Novel Silicone-Modified Polyurethane Dispersion Technology for Advanced Coating Systems**

Christopher Howard, Markus Hallack, and Dr. Udo Schiemann  
Tego Coating Additives and Specialty Resins

**“Deforming Theory and Application in Paints and Coatings”**

Charles R. Hegedus, Jim Reader, Kuo Tsai G Lai, Robert A Snow, Xin Tian, Yi Sun, Wilco Chaigneau, Christine Louis, Jonathan E Sefko, and J Renae Bennett  
Air Products and Chemicals, Inc.

**“Easy Dispersing Pigments for Industrial Coatings”**

Romesh Kumar  
Clariant Corporation

**“The Use of Aqueous Pre-Dispersed Fumed Silica to Improve Film Formation in Waterborne Coatings”**

Matthew Linares  
Evonik Degussa Corporation

**“Preparation of Two Steps Cathodic Electrophoresis Coating Mixed with Aluminum Powder on Magnesium Alloy”**

Huicong Liu, Liqun Zhu, Weiping Li  
School of Materials Science and Engineering, Beihang University, 100191, Beijing, China

**“ZnO-based Nanoparticle Additive for Water Based Metal Coatings”**

Steffen Pilotek  
Buhler Inc

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**High Output Synthesis and Formulation R&D in the Paint & Coating Industry**

Josef Schröer

Chemspeed Technologies

**“UV Curable Powder Coatings for Heat Sensitive Substrates”**

Ryan Schwarb and Jim Cox

Keyland Polymer Ltd.

**“APEO-Free Ether Sulfates for Emulsion Polymerization”**

Melanie A. Sharp, K. Lee Matheson, and Kip D. Sharp

Sasol North America

**The Weatherability of Waterborne Nanocomposite Paints for Exterior Wood**

Mirela Vlad<sup>a, b</sup>, Bernard Riedl<sup>a</sup>, Pierre Blanchet<sup>b, a</sup>

<sup>a</sup> Département des sciences du bois et de la forêt, Université Laval, Québec, Canada

<sup>b</sup> FPIInnovations – Forintek, Québec, Canada

**“Novel Amine Dispersion for Waterborne Epoxy Coatings”**

Tracy Wickmann, Stephen Monaghan, and Matthew Engel

Air Products and Chemicals, Inc

**“High Throughput Methods for Developing Low VOC Waterborne Coatings Derived from Polyurethane Dispersions based on Natural Oil Polyols”**

Jung Kwon Oh, Bedri Erdem, Jeff Anderson, Kumar Nanjundiah, and Jeff Sweeney

Dow Coating Materials, Dow Chemical Company

**“High Solid Formulations for Waterborne coatings: Hybrid Coatings and Means of Production”**

Timothy F.L. McKenna<sup>1,2</sup>, Ula El-Jaby<sup>1,2</sup>, Michael Cunningham<sup>1</sup>, Ravindra Udagama<sup>1,2</sup>, and Elodie Bourgeat Lami<sup>2</sup>

<sup>1</sup>Department of Chemical Engineering, Queen’s University, ON, Canada

<sup>2</sup>CCPP/CPE UMR 5265, 43 Bd du 11 Nov. 1918, BP 2077, 69616 Villeurbanne Cedex, France

**"Painting TPO: 25 Years and Still Sticking"**

Phillip Yaneff, Consultant

**"Automotive Design Trends on Coating Demand"**

Rose A Ryntz

IACA

**“Biocompatible Waterborne Emulsions for Protection of Wounds”**

Jan W Gooch

Georgia Institute of Technology

National Research Council at the US Army Institute of Surgical Research

**“Environmentally Friendly additives for both Emulsion Polymerization and Waterborne Coatings Formulation”**

Herve Adam, Jose P Ruiz, Lichang Zhou, Pierre Hennaux, and YiZhong Li

Rhodia, Inc

**“Use of Biobased Polyol 2K Urethane Coatings”**

Ayumu Yokoyama, Sheau-Hwa Ma, Pat Sormani, Rajesh Saliya, Hari Sunkara, Stefen Reinartz, and Robert Butera

Dupont

**“2K Waterborne Polyurethane Technology for Automotive Clearcoats Application”**

Phillippe Barbeau

Perstorp, France

**“Waterborne Polyurethane Coatings for Glass Substrates”**

Abdullah Ekin and Raymond Stewart  
Bayer Material Sciences LLC

**“FEVE Fluoropolymer Resins – FEVE Emulsions in Architectural Coatings”**

Robert Parker  
AGC Chemicals Americas

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