

# 2011 CARBON FIBER

December 5-7 — Washington Marriott, Washington, DC

## Monday, December 5

- 7:30-8:30**      **Registration for Preconference Workshop 1**
- 8:30-12:15**      **Low-Cost Carbon Fiber for Emerging Energy Applications**  
*(Separate fee required)*  
NED STETSON / DOE EERE Fuel Cell Technologies Program  
CLIFF EBERLE / Oak Ridge National Laboratory  
C. DAVID WARREN / Oak Ridge National Laboratory  
TIA BENSON-TOLLE / Air Force Research Laboratory
- 12:30-1:30**      **Registration for Preconference Workshop 2**
- 1:30-5:00**      **2011 Global Market Opportunities for Carbon Fibers:**  
**An Industry Evolving into High-Volume Processing**  
*(Separate fee required)*  
ANTHONY (TONY) ROBERTS / AJR Consultant LLC  
DAVID SERVICE / Bluestar Fibres Company Ltd.  
CHRIS RED / Composites Forecasts and Consulting, LLC (CFC)
- 6:00-8:00**      **Registration and Opening Cocktail Reception**



***(Sponsored by Harper International, Platinum Sponsor)***

*Check in for the conference and meet fellow attendees  
at this two-hour opening reception*

## Tuesday, December 6

- 7:30 a.m.**      **Registration and Continental Breakfast**  
*Enjoy a continental breakfast and informal discussion with your colleagues*
- 8:30**              **Welcome, Introductions and Conference Overview**  
SCOTT STEPHENSON / Director, CompositesWorld Conferences  
STEVEN CARMICHAEL / Director of Sales, Grafil / Mitsubishi Rayon Company  
TOM HAULIK / Carbon Fiber Sales Manager, Hexcel

## ***Keynote Presentation***

- 9:00**            **Airbus Composites Innovation: Current and Future Perspectives**  
BRUNO BERL / Head of Structure Policy & Development, Engineering Structure, AIRBUS S.A.S
- 9:30**            **Aerospace Industry Advanced Manufacturing Needs for Carbon Fiber**  
SLADE GARDNER / Fellow-Materials & Structures Technologies, Lockheed Martin Advanced Technology Center
- Fiber evolution
  - Aerospace priorities
  - Advanced manufacturing
- 10:00**           **The Effect of Technology and Market Acceptance on the Future Advanced Materials Market**  
STEVE SPEAK / President, Steve Speak Coaching and Consulting
- 10:30**           ***Refreshment Break***
- 11:00**           **Expanding Composites Adoption through Applications Engineering**  
CARMELO LO FARO / VP Technology, Cytec Engineered Materials
- Combining design, materials and processing knowledge to achieve breakthrough composite solutions
- 11:30**           **Carbon Fiber and GE Wind Energy Ecomagination**  
NIRAV PATEL / Senior Lead Engineer, GE Energy-Advanced Sourcing Engineering
- Carbon fiber reinforcing GE's next generation wind turbine
  - Evolution of GE's next generation wind turbine with carbon fiber
- 12:00**           ***Presentation and Group Discussion***
- "How a Powerhouse Composite Materials Supplier Was Built and What the Past Can Teach Us about the Future of the Composites Business"***  
TOM BRAND / Former CEO, Fiberite
- 12:30**           ***Informal Roundtable Luncheon***



***(Sponsored by Despatch Industries, Gold Sponsor)***

*Network with fellow delegates and enjoy a three-course luncheon*

- 1:30**            **Emerging Market for Carbon Fibers in Marine CNG: Materials Forecast & Potential Supply Needs**  
FRANCESCO NETTIS / Blue Mgmt Limited

- 2:00 Composite Materials in Ice Hockey Stick Design**  
ADAM GANS / Director, Product Development-Sticks, Bauer Hockey
- Market background
  - Dynamics of hockey – stick mechanics
  - Material solutions and considerations
- 2:30 Carbon Fiber in Bicycle Production and the Importance of Recycling at TREK**  
JAMES (JIM) STIKE / CEO, Materials Innovation Technologies  
JAMES COLEGROVE / Senior Engineer, Trek Bicycle Corporation
- 3:00 Litzler Composites – A Focus on Technology**  
MATT LITZLER / President, C.A. Litzler, Inc.
- Oxidation Ovens and More – a Fresh Look – a Fresh Perspective
  - Oxidation ovens – Energy savings
  - G5 End-seal developments
  - Specialized Conveyor/tension stand design criteria
  - Thermoplastic prepreg developments
- 3:30 Refreshment Break**
- 4:00 The Composites Manufacturing HUB – Crowd Sourcing as the Norm**  
R. BYRON PIPES / John L. Bray Distinguished Professor of Engineering,  
Purdue University
- 4:30 The Obama Administration's Export Control Reform Efforts Pertaining to Composites**  
KEVIN WOLF / Assistant Secretary of Commerce for Export Administration,  
Bureau of Industry and Security
- 5:00 Conference Adjourns**
- 6:00 Grand Cocktail Reception**

# LITZLER

## OXIDATION OVENS

*(Sponsored by C.A. Litzler Co., Inc., Diamond Sponsor)*  
*Network with fellow participants and enjoy hors d'oeuvres*  
*at this two-hour cocktail reception*

**Wednesday, December 7**

**7:45 Continental Breakfast**

- 8:45**            **Midconference Summary and Announcements**  
 SCOTT STEPHENSON / CompositesWorld Conferences  
 STEVEN CARMICHAEL / Grafil / Mitsubishi Rayon Company  
 TOM HAULIK / Hexcel
- 9:00**            **What's New in Composite Tooling?**  
 DAVE DICKSON / Tooling Technical Development Leader, Boeing Commercial Airplanes
- 9:30**            **Life Cycle Benefits of Automotive Lightweighting by CFRP**  
 SUJIT DAS / Senior R&D Staff Member, Energy and Transportation Science Division  
 Oak Ridge National Laboratory National Transportation Research Center
- Potential for CFRP as one of the viable automotive lightweighting options
  - Life cycle pathways considered for alternative carbon fiber and part manufacturing technologies
  - Role of vehicle use phase on overall life cycle energy and emissions impacts
  - Illustrate the importance of the specific vehicle life cycle stage for its overall environmental advantage
- 10:00**            **(HP-CRTM) - Fast Cycling Automated Process Solution**  
 CHRISTIAN FAIS / General Sales /Project Manager, Dieffenbacher North America Inc.
- 10:30**            ***Refreshment Break***
- 11:00**            **High-Performance Large Tow Carbon Fiber for Growing Industrial Applications**  
 MARK OKUNO / Sales Manager – North America, Grafil / Mitsubishi Rayon Company
- 11:30**            **Panel and Group Discussion**
- It's complicated! Does the complexity inherent in CF composites hurt or help market acceptance and growth?***  
**Moderated by: JEFF SLOAN / Editor-in-Chief**  
***High Performance Composites & Composites Technology Magazines***
- 12:15**            ***Informal Roundtable Luncheon***
- 1:30**            **Slit Tape Prepregs: Well-accepted in Aerospace Thermosets, Extending Benefits to New Markets, Processes, and Material Types**  
 DAN OTT / Director, Business Development, Advanced Composites, Web Industries, Inc.
- 2:00**            **Advances in Manufacturing and Design Techniques to Enable the Adoption of 3D Woven Carbon Fiber Structures into Technical Markets**  
 CHRIS MCHUGH / Technical Manager, Sigmatex (UK) Ltd
- Market opportunities for 3D structures
  - Current enabling technologies for woven 3D structures
  - Improvements in processing methods to increase output rates
  - Future expectations for woven 3D structures

**2:30 Flexible and Highly Productive Approaches to the Production of Semi-finished Carbon Fiber Fabrics**

LUTZ HEINIG / Technical Manager, Karl Mayer North America

- Production of multilayered stitch-bonded carbon NCF
- Improving the fiber orientation of carbon tows
- Use of carbon creels with inline fiber spreading
- Off-line carbon spreading for dry single layers

**3:00 *Refreshment Break***

**3:30 Swift Press Cure**

RICK HEISE / Director of Engineeringr, Swift Engineering

- Motorsports is a great vehicle for exploration
- Powerful Blue silicone
- Short-cycle press cure
- Pressure optimization and other markets

**4:00 Accelerating the Adoption of Carbon Fiber across Industries by Moving Beyond CAD**

RANI RICHARDSON / Composites Product Specialist, Dassault Systemes

**4:30 Conference Summary and Conclusions**

STEVEN CARMICHAEL / Grafil / Mitsubishi Rayon Company

TOM HAULIK / Hexcel

SCOTT STEPHENSON / CompositesWorld