

Forest Products Society

# 42<sup>nd</sup> International Wood Composites Symposium 2008

April 1-2, 2008  
Seattle, Washington, USA

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

**ISBN: 978-1-60560-452-7**

**Some format issues inherent in the e-media version may also appear in this print version.**

© 2008

Washington State University is the copyright holder in the compilation entitled The International Wood Composites Symposium Proceedings. Washington State University is authorized to and does grant permission to copy any paper contained herein with proper attribution upon request.. The authors also retain their individual copyrights. Permission to copy is granted for non-profit educational use. The views expressed in the articles of this publication are not to be understood as views of Washington State University

Forest Products Society  
42<sup>nd</sup> International Wood Composites Symposium  
2008

## TABLE OF CONTENTS

<b>CARB: A Challenge and an Opportunity for Composite Panels</b> .....	1
<i>John Bradfield</i>	
<b>Some Observations on the Determination of Free Formaldehyde in Amino Resins</b> .....	38
<i>Bruce M. Broline, Reginald A. Mbachu, Michael S. Monahan</i>	
<b>Release Agents for the Wood Composites Industry</b> .....	73
<i>Timothy C. Brown</i>	
<b>Brazilian MDF Market Evolution and the Duratex Challenge of Building the World's Largest MDF Line</b> .....	99
<i>Mario Colombelli Filho</i>	
<b>Global Emission Standards and Improved Methods for the Analysis of Low Formaldehyde Emissions</b> .....	143
<i>Frederic DeChamplain</i>	
<b>Role of Forests and Panel Industry in the Carbon Market</b> .....	178
<i>Laszlo Dory</i>	
<b>Real time determination of Formaldehyde Emission from Particleboards Using NIR Spectroscopy</b> .....	256
<i>Bjorn Engstrom</i>	
<b>Machining of Wood and Engineered Wood Products with Plasma-Sharpended CVD Diamond Cutting Edges</b> .....	296
<i>Magnus Enssle, U. Heisel</i>	
<b>New Biotreatment Technology for MACT Compliance</b> .....	303
<i>Rod Gravley</i>	
<b>Production Safety During Wood-Based Panels Production</b> .....	325
<i>Kai Greten</i>	
<b>The Free-Formaldehyde Emission Issue – An Australasian Perspective</b> .....	330
<i>Jamie Hague</i>	
<b>Development of a Quick Test for Chipboards to Determine Siliceous Impurities</b> .....	359
<i>Stoyanka Ivanovna, U. Heisel</i>	
<b>On-line Monitoring Systems for High Volume Production</b> .....	366
<i>Hauke Kleinschmidt</i>	
<b>Expanding Market Presence with Specialty Panels</b> .....	413
<i>Ken Pratt</i>	
<b>The Changing Game in Wood Composite Testing</b> .....	424
<i>Sunil Ramachandra</i>	
<b>Lightweight Particleboards Made from Annual and Perennial Plants or Based on Foamed Adhesives</b> .....	443
<i>Peter Meinschmidt, Anke Schirp, Brigitte Dix, Volker Thole</i>	

**Nanotechnology Applications for Improving Durability of Wood Products** ..... 496  
*Lacramioara Schulte*

**European Formaldehyde Test Methods: Procedures and Practical Experiences** ..... 521  
*Harald Schwab*

**Keynote Address: Leveraging our Strengths – Growing our Business**..... 561  
*Kelly Shotbolt*

**Treating Emissions Of Volatile Organics** ..... 595  
*Rakesh Govind*

**Soy Adhesive for Hardwood Plywood** ..... 613  
*Chris J. Watt*

**One Board Does Not Fit All - The Many Specifications of the Furniture Industry** ..... 649  
*Michael Zimmerman*

**Author Index**