

Pulping
Engineering
Environmental
Recycling
Sustainability



Technical Solutions
for Today and Beyond

PROGRAM TRACKS

Career Development ✓	Corrosion & Materials Engineering	Engineering, Power & Recovery, Recast, & Lime Kiln	Environmental
Nonwood	Pulping & Bleaching	Recycling	Sustainability
IBBC Conference			

PROGRAM

AS OF 08-22-18 (SUBJECT TO CHANGE)

Sunday, October 28, 2018	
7:30AM – 4:00PM	Bleach Plant Operations Workshop**
8:00AM – 4:00PM	Brown Stock Washing Workshop**
9:00AM – 2:00PM	Process & Mechanical Overview Workshop of Lime Kiln and Recast Operations**
8:00AM – 4:00PM	Process Simulation Workshop**
12:00PM – 1:00PM	Joint Team Review of Conference Logistics*
1:00PM - 4:30PM	Engineering Division & Pulp Manufacture Division Councils*
4:00PM - 5:00PM	Nonwood Fiber Committee Meeting
4:00PM - 5:00PM	Alkaline Pulping & Bleaching Committee Meeting
5:00PM – 7:00PM	Welcome Reception
7:00PM -9:30PM	Awards Dinner*

* Invitation Only

** Additional registration fee required

Monday, October 29, 2018

7:00AM – 8:15AM	Speaker Breakfast
8:30AM – 10:00AM	Session 1: Opening Session & Keynote ✓ Session Chair: <i>Mark LeBel, Andritz</i> Keynote: <i>John Carpenter, President, Nippon Dynawave Packaging</i>
10:00AM– 10:30AM	Break
10:30AM-12:00PM	Session 2: Advances in Pulping and Bleaching✓ Session Chair: <i>Brian Brogdon, Future Bridge Consulting Services, LLC</i>
	<p>Catalyzed Pulping Using Cobalt Salcomine - <i>Alan Rudie, Forest Products Laboratory</i></p> <p>Technological Evaluation of <i>Pinus Maximinoi</i> Wood for Industrial Use in Kraft Pulp Production- <i>Flaviana Reis Milagres, Klabin S.A.</i></p> <p>Validation of a Modified Bertly Reactor for Studying the Intrinsic Kinetics and Selectivity of Oxygen Delignification of Southern Pine Kraft Pulp - <i>Azadh Pahlevanza, University of Maine</i></p>
10:30AM-12:00PM	Session 3: State of the Industry ✓ Session Chair: <i>Daniel Curry, TRC Environmental Corporation</i>
	<p>State of the Industry – <i>David Turpin, APPTI</i></p> <p>Managing Investing Decisions in Pulp and Paper Industry - <i>Gagandeep Issar, Enerflex</i></p>
10:30AM-12:00PM	Energy, Recovery and Recaust Steering Committee Meeting*
12:00PM – 1:30PM	Lunch
12:00PM – 1:20PM	Engineering Division Committee of Chairs Meeting*
1:30PM – 3:00PM	Energy, Recovery and Recaust Main Committee Meeting
1:30PM – 3:00PM	Session 4: New Technology Showcase Session Chair: <i>Randy Stern, Valmet</i>
	<p>NeuroDIC Software for Quantification of the Volume of Stacked Wood - <i>Harliany Matias, HaDa Tecnologiz</i></p> <p>Old Drum Washer Updating and Reducing Consumption – <i>Henry Chen, Wenrui Machinery (Shandong) Co., Ltd.</i></p>


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1:30PM – 3:30PM	Session 5: Brownstock Washing Session Chair: <i>Mathias Lindström, International Paper</i>
	How to Use TDS Measurements to Evaluate the Performance of Diffuser Washers – Mill Study - <i>Riku Kopra, South-Eastern Finland University of Applied Sciences, Fiber Laboratory</i> Fast and Accurate Online Measurement of Differentiated Lignin and HexA Kappa Numbers Leads to Improved Fiberline Control - <i>Niclas Andersson, BTG Instruments</i> Novel Chemistries Enable Pulp Mills to Recover Lost Washing Efficiency - <i>Harold Petke, Solenis</i>
1:30PM – 3:30PM	Session 6: Young Professionals Panel ✓ Moderator:
1:30PM – 3:30PM	Session 7 Recycling for Tissue Production Panel Discussion Moderator: <i>Cesar Basilio, Thiele Kaolin Company</i>
3:00PM – 3:30PM	Break
3:30PM – 5:00PM	Session 8: Bleaching Optimization ✓ Session Chair: <i>Tom Mullen, Process Innovations</i>
	pH in the Bleach Plant - Why It's Important and What to Do About It - Part I: ClO ₂ Stages - <i>Doug Reid, AkzoNobel Pulp and Performance Chemicals</i> Evaluating Washer Carryover on the Optimization of Elemental Chlorine-Free (ECF) Bleaching Sequences by Using Steady-State Models - <i>Brian Brogdon, Future Bridge Consulting Services, LLC</i> Mill Implementation of the Near-Neutral Chlorine Dioxide Brightening Technology at Domtar Johnsonburg – <i>Michael J. Subilia II, Domtar</i>
3:30PM - 5:00PM	Committee Meetings: Energy Subcommittee (ERR) Lime Kilns & Recaust Subcommittee (ERR) Recovery & Power Boilers Subcommittee (ERR) Water Treatment Subcommittee (ERR) Corrosion & Materials Engineering Main Committee Environmental & Sustainability Working Group
3:30PM - 5:00PM	Session 9: Recycling Session Chair: <i>Cesar Basilio, Thiele Kaolin Company</i>
	Disc Filter Total Care-Keeping Your Filter from Becoming a Money Pit - <i>Mick Wert & Nicolas Reinke, Voith</i> Cleaner Efficiency Determination via Sequential Extraction in OCC Pulp - <i>Ashok Ghosh, WestRock</i> Using Intelligent Cameras in Pulp Production - <i>Petri Karhula, Procemex, Inc.</i>

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3:30PM - 5:00PM	Session 10: Nonwood Session Chair: Gary Breaux, Solvay
	Pulping and TCF Bleaching of Canadian Wheat Straw and Oat Straw - <i>Robert (Bob) Hurter, HurterConsult, Inc.</i> Characteristics and Potential of Sulfur-Free Nonwood Lignin - <i>Sabrina Burkhardt, Sustainable Fiber Technologies</i> Cannabis, a Higher Style of Pulping - <i>Mark Lewis, Sustainable Fiber Technologies</i>
5:00PM-6:30PM	Reception
7:00PM-9:00PM	PEERS Conference Networking Dinner** Sponsored by: 
Tuesday, October 30, 2018	
6:45AM - 8:30AM	Hot Topics Breakfast Bleach Plant Scale Control Moderator: <i>Peter Hart, WestRock</i> Nonwood Moderator: <i>Sabrina Burkhardt, Sustainable Fiber Technologies</i> Bleach Plant Optimization: Where to Use the Various Bleaching Chemicals in Bleaching Sequence Moderator: <i>Brian Brogdon, Future Bridge Consulting Services LLC</i> Black Liquor Firing Techniques Moderator: <i>Pasi Miikkulainen, Andritz</i> Overview of APPTI Alliance Moderator: <i>David Turpin, APPTI</i> Tariff Impacts to the Paper Industry Moderator: <i>Meg Murphy, Felker Brothers</i>
6:45AM – 8:00AM	PaperChase Fun Run/Walk
7:00AM – 8:15AM	Speaker Breakfast
8:30AM – 10:00AM	Session 1: IBBC Keynote Session Chair: R. Daniel Haynes, AkzoNobel Specialty Chemicals
8:30AM – 10:00AM	Plant Engineering & Project Management Committee

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8:30AM – 10:00AM	Session 11: Lime Kiln Refractories Session Chair: Ray Leary, Houghton Cascade Holdings LLC
	Refractory Brick Installation Guidelines for Increased Kiln Reliability - <i>Chris Hersh, Harbison Walker International</i> Selection of Refractories in Lime Sludge Kilns to Balance Cost and Efficiency - <i>Chris Macey, RESCO Products, Inc.</i> Energy Saving Refractory Products to Reduce Your Carbon Footprint - <i>Garret Pair, Refratechnik North America, Inc.</i>
8:30AM – 10:00AM	Session 12: Waste Water Treatment Advances Session Chair: Barry Malmberg, NCASI
	A Review of Phosphorus Removal Technologies for Pulp-and-Paper Wastewater Treatment Plants – <i>Heather Jennings, Probiotic Solutions</i> Venturi Injection for Pulp and Paper Mills - <i>Mike Spillner, Mazzei Injector Company, LLC</i> Membrane Treatment Technology - <i>Andrew Hodgkinson, Jacobs Consultancy</i>
8:30AM – 10:00AM	Session 13: Liquor Chemistry & Control ✓ Session Chair: Pasi Miikkulainen, Andritz
	Soap Separation - A New Option for Removal of NPEs - <i>Karin Lindgren, RISE Bioeconomy (Former Innventia)</i> The Solubility of Calcium Carbonate in Green Liquor Handling Systems - <i>Alisha Giglio, University of Toronto</i> Use of Direct Steam Injection to Control Black Liquor Temperature and Ensure Optimal Drop Size - <i>Shawn Berg, Hydro-Thermal Corporation</i>
10:00AM – 10:30AM	Break
10:30AM – 12:30PM	Session 14: Bleaching Chemical Session Chair: Ashok Ghosh, WestRock
	Are There Advantages to Using 50% versus 10% Strength Peroxide in Pulp Bleach Plants? - <i>Peter Hart, WestRock</i> Advances in the ERCO Smarts APC - <i>David Dean, ERCO Worldwide</i> Singlet Oxygen Generated Onsite for Safely Augmenting or Replacing Existing Chlorine Bleaching Stages - <i>Wayne Buschmann, Clean Chemistry, Inc.</i> Economic Fundamentals of Ozone Bleaching - <i>Alexis Métais, Xylem Inc.</i>

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10:30AM – 12:00PM	Session 15: Combustion & Emission Session Chair: John LaFond, Jansen Combustion & Boiler Tech. Inc.
Joint Session: Engineering, Power & Recovery, Recast, & Lime Kiln / Environmental	Impact of Wood species on Biomass Combustion - <i>Naz Orang, University of Toronto</i> Reduction of Particulate and NOX Emissions from Kraft Recovery Boilers Using Catalytic Filtration Technology - <i>Jim Wearing, Noram Engineering & Construction Ltd.</i> Factors Impacting CO and NO _x Emissions on Biomass-Fired Stoker Boilers - <i>Marcel D. Berz, Jansen Combustion and Boiler Technologies, Inc.</i>
10:30AM – 12:00PM	Session 16: Project Management Panel Discussion Moderator: Qiang Han, International Paper
10:30AM – 12:00PM	Session 17: Refractory Installation Panel Discussion Moderator: J. Peter Gorog, Houghton Cascade Holdings, LLC
10:30AM – 12:00PM	Session 18: Optical Properties, Stickies, and Strength Tutorial Session Chair: Carl Houtman, US Forest Products Laboratory
10:30AM – 12:30PM	Session 2: Torrefaction and Densification Technologies Session Chair: Sudhagar Mani, University of Georgia
	Torrefied Biomass - Status of Development, Market Requirements, Supply Chain Evaluation and Comparison - <i>Michael Wild, Wild & Partner, LLC</i> Integrated Biomass Torrefaction and Densification Plant: Process Modeling and Plant Economics - <i>Sudhagar Mani, University of Georgia</i> Licensing Torrefaction and Densification Technologies - <i>Hiroshi Morihara, HM3 Energy</i> High Moisture Pelleting Studies in a Pilot Scale Ring Die Pellet Mill with 1 ton/h Throughput - <i>Jayashankar Tumuluru, Idaho National Laboratory (INL)</i>
12:00PM – 1:20PM	2019 PEERS Tech Program Planning Meeting
12:00PM – 1:30PM	Lunch
12:30PM – 1:30PM	Biorefinery Committee
1:30PM – 2:30PM	Fiber Recycling Committee Environmental & Sustainability Working Group
1:30PM – 3:00PM	Session 19: Managing Mill Processes ✓ Session Chair: Chris Jackson, Nautilus Loss Control, LLC
	The Sticky Behavior of Pulp and Paper Biosludge During Drying - <i>Geanna Hovey, University of Toronto</i> Most Typical Failures in Kraft Recovery Boilers-A Statistical Approach - <i>Keijo Salmenoja, ANDRITZ, Oy</i> Managing Evaporator Fouling for Operational Efficiency - <i>Andrew Anacker, Lundberg, LLC; Jarmo Kaila, Andritz</i>

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1:30PM – 3:00PM	Session 20: Oxygen Delignification Session Chair: <i>Hasan Jameel, North Carolina State University</i>
	More Efficient Oxygen Delignification - <i>Philip Hoekstra, Buckman Laboratories</i> Oxygen Delignification Performance, Caustic Soda vs. Unoxidized White Liquor - A Mill Study - <i>Bruno Goncalves, Spark Consultoria</i> The State and Role of Gas Dispersion in the Oxygen Delignification Process - <i>Jari Käyhkö, South-Eastern Finland University of Applied Sciences, FiberLaboratory</i>
1:30PM – 3:30PM	Session 21: Improved Kiln Operation & Efficiency I ✓ Session Chair: <i>Wei Ren, FPInnovations</i>
	From Physical Modelling to CFD: -20 Years of Development in Kiln Modelling Techniques - <i>Martin Beddows, KFS</i> Influence of CFD on Lime Sludge Kiln Burner Design - <i>Adriano Greco, FCT Combustion</i> Using Wood Powder as Fuel in Lime Kilns - <i>Suzanne Wind, Valmet</i> Kiln Axis Survey “Alignment Methodology to Increase Accuracy” - <i>Glenn Hanson, Industrial Kiln & Dryer Group</i>
1:30PM – 3:00PM	IBBC Session 3: Biorefinery Infrastructure Session Chair: <i>Scott Curry, CQ Strategy Ltd.</i>
	Failure Analysis of Wood Gasifier Vessels - <i>James Keiser, Oak Ridge National Laboratory</i> Valmet’s “BIO” Efforts – <i>Jean-Pierre Bousquet, Valmet</i> Techno-Economic Assessment of Pulp Mill Infrastructure Integration with the Alcohol-to-Jet Pathway for Aviation Fuel Production - <i>Scott Geleynse, Washington State University</i>
3:00PM – 3:30 PM	Break
3:30PM – 5:00PM	Session 22: Pacific Northwest TAPPI Local Section Panel Discussion Moderator: <i>Alistair Twaddle, International Paper</i>
	Chip Supply Issues-Quality and Quantity in Pacific Northwest <i>(Hosted by NW TAPPI)</i>
3:30PM – 5:00PM	Session 23: Automation Panel Discussion Moderator: <i>Ben Bunner, Andritz</i>
	Panelists: <i>Chris Sousa, Andritz</i> <i>Jeff Butler, Valmet</i>
3:30PM – 5:00PM	Session 24: Detrashing Panel Discussion ✓ Moderator: <i>Ryan Henry, Green Bay Packaging</i>
	Panelists:

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3:30PM – 5:00PM	Session 25: Environmental Panel Discussion ✓ Moderator: Daniel Curry, TRC Environmental Corporation
	A Summary of the Implications of Carbon Tax Legislation to the Pulp and Paper Industry - <i>Barry Malmberg, NCASI</i> A Review of the Oregon Air Toxics Program - What Does it Mean for Operations - <i>Katheryn Van Natta, North West Pulp and paper Association</i> Effluent and the Environment: Patterns from an Integrated, Long-term Study in Effluent Receiving Waters - <i>Camille Flinders, NCASI</i>
3:30PM – 5:30PM	Session 26: Processing Conditions and How They Affect Materials in Pulp and Paper Session Chair: Katie Day, Sandvik
	Corrosion and Scale Problems in Recovery and Power Boilers in Pulp and Paper Operations - <i>Chad Frierson, United Water Consultants</i> RoHS: 10 Years Later – Process Control Equipment Corrosion Issues Remain - <i>Christopher Muller, Purafil, Inc.</i> Corrosion Resistant FRP Equipment for Pulp and Paper - <i>Kevin Lambrych, Ashland</i> In-Service Nonmetallic Inspections and Reliability - <i>Michael Yee, RTConsults, PLLC</i>
3:30PM – 5:00PM	IBBC Session 4: Rapid Fire Showcase Session Chair: J. P. Bousquet, Valmet
	A New Process for Catalytic Fractionation of Organo-solv Lignin to Biofuels and High-Value Added Chemicals - <i>Joseph Molle, University of Wisconsin-Stevens Point</i> Wood Quality and Pulpability of Eucalyptus Woods Affected by Physiological Disturbance - <i>Juliana Marangon Jardim, North Carolina State University</i> Fractionation of Lignin Recovered from Hot-Water Extracts of Angiosperms and its Application in Synthesis of Lignin-Based Products - <i>Aditi Nagardeolekar, SUNY-ESF</i>
5:00PM – 6:30PM	Reception & IBBC Poster Session
	A New Process for Catalytic Fractionation of Organo-solv Lignin to Biofuels and High-Value Added Chemicals - <i>Joseph Molle, University of Wisconsin-Stevens Point</i> Wood Quality and Pulpability of Eucalyptus Woods Affected by Physiological Disturbance - <i>Juliana Marangon Jardim, North Carolina State University</i> Fractionation of Lignin Recovered from Hot-Water Extracts of Angiosperms and its Application in Synthesis of Lignin-Based Products - <i>Aditi Nagardeolekar, SUNY-ESF</i>
6:30PM -7:30PM	Young Professionals Mixer

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Wednesday, October 31, 2018

6:45AM - 8:30AM	<p>Hot Topics Breakfast</p> <p>Increasing Kiln Reliability Moderator: <i>Glenn Hanson, Industrial Kiln & Dryer Group</i></p> <p>Reduction Efficiency Measurements Moderator: <i>Thanh Tran, FITNIR</i></p> <p>Improving Kraft Pulping/Pulp Yield Moderator: <i>Hasan Jameel, North Carolina State University</i></p> <p>O₂ Delignification Optimization/Benchmarking Moderator: <i>Tom Mullen, Process Innovations</i></p> <p>Keeping Composure in Difficult Situations Moderator: <i>Heather Jennings, Probiotic Solutions</i></p> <p>Value Add Products From lignin Moderator: <i>Danny Haynes, AkzoNobel</i></p> <p>Water Handling (Non-Boiler) Corrosion. It's Not Always MIC Moderator: <i>Katie Day, Sandvik</i></p>
7:00AM – 8:15AM	Speaker Breakfast
8:30AM-10:00AM	Session 27: Material Handling Panel Discussion ✓ Moderator:
8:30AM-10:00AM	Session 28: Stainless Steels and Specialty Alloys for Pulp, Paper and Biomass Conversion-18 Years Later Panel Discussion ✓ Moderator: <i>Andy Garner, Andy Garner Consulting</i>
8:30AM-10:00AM	Session 29: TAPPI- TIPS Panel Discussion Moderator: <i>Tom Mullen, Process Innovations</i>
8:30AM-10:00AM	Session 30: Bi-Product Sustainability Session Chair: <i>Jack Porter, FITNIR Analyzers, Inc.</i>
Joint Session: Engineering, Power & Recovery, Recast, & Lime Kiln / Sustainability	<p>Reuse of CO₂ in Pulp Mills - <i>Katja Kuparinen, Lappeenranta University of Technology</i></p> <p>Methanol, From Waste Byproduct to Valuable Fuel - <i>Olle Wennberg, Valmet</i></p> <p>What Happens When the Fiber Disappears? - <i>Bill Nichols, KBR</i></p>

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8:30AM – 10:00AM	Session 31: Improved Kiln Operation & Efficiency II Session Chair: <i>Subra Arasakesari, International Paper</i>
	The Mechanical Effects on the Rotary Kiln When Increasing the Production Cycle from 12 Months to 18 Months in the Pulp and Paper Industry - <i>Andrew Wisner, Andritz</i> Proactive Ring Removal in the Lime Recovery Kilns - <i>Jim Conover, Mole Master Services Corporation</i> Lime Kiln Control Design for Perpetual Performance and Profit - <i>Michael Simpson, Emerson</i>
8:30AM – 10:00AM	IBBC Session 5: Lignin to Whatever Session Chair <i>Peter Axegård, C-Green Technology AB</i>
	Unlocking the Potential of Industrial Grade Lignin for Enhancing Sustainability and Performance of the Polyurethane Insulation Foam – <i>Pratheep Kumar Annamalai, The University of Queensland</i> Fractionation of Lignin Recovered from Hot-Water Extracts of Angiosperms and its Applications in Synthesis of Lignin-Based Products – <i>Aditi Nagardeolekar, SUNY-ESF</i> Selecting Solvents for Lignin Value Prior to Pulping - <i>Thomas T. Kwok, Georgia Institute of Technology</i>
10:00AM – 10:30AM	Break
10:30AM – 12:00PM	Session 32: Improving Operations Through Simulations Session Chair: <i>Andy Jones, International Paper</i>
	Dynamic Modelling of a Kraft Pulp Mill Producing Softwood and Hardwood Pulp in Campaigns - <i>Johan Wallinder, RISE Bioeconomy (former Innventia)</i> Controlling Mill Power Plant Parasitic Costs While Optimizing Productivity, Safety & Environmental Compliance via Tramp Air control - <i>Patrick Fitzgerald, High Temperature Technologies</i> Development and Application of an Object-Oriented Simulation Tool for Kraft Recovery Processes - <i>Michael Erbes, Enginomix</i>
10:30AM – 12:00PM	Session 33: Pulping Non-Process Elements Session Chair: <i>Sabrina Burkhardt, Sustainable Fiber Technologies</i>
	Chemical and NPE Balances when using Oxidized White Liquor in the Bleach Plant Extraction Stage - <i>Tom Mullen, Process Innovations</i> Digester Scale Control: Fundamentals and Best Practices for Responding to Process Variations - <i>Michael Wang, Solenis, LLC</i> A Review of Green Liquor Scale Formation - <i>Peter Hart, WestRock</i>

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10:30AM – 12:00PM	Session 34: Current Evaporator Issues and Technology Panel Discussion Moderator: <i>Chris Verrill, International Paper</i>
	<i>Panelist:</i> <i>Jarmo Kaila, Andritz</i> <i>Andrew Anacker, HPD</i> <i>Niko DiMartini, University of Toronto</i> <i>Randy Stern, Valmet</i>
10:30AM – 12:00PM	Session 35: Reliability Panel Discussion Moderator:
10:30AM – 12:00PM	Session 36: Energy Optimization ✓ Session Chair: <i>Danny Tandra, Clyde Bergemann Power Group</i>
	Paper Mill Power Plant Optimization-Realizing the Value of Low Pressure Steam - <i>Ricardo Santos, WestRock</i> Kraft Pulping Warm and Hot Water System Strategies - <i>James Cantrell, Jacobs Engineering</i> Optimization of Turbine Governors Performance for Improved Plant Operation - <i>Ben Janvier, Enero Solutions</i>
10:30AM – 12:00PM	IBBC Session 6: Value Added Products Part I Session Chair: <i>Adriaan van Heiningen, University of Maine</i>
	Turning Bio-Sludge into Bio-Carbon Through Zero-Energy Hydrothermal Carbonization - <i>Peter Axegård, C-Green AB</i> Alternative Pulping Process for Paper and High Value-Added Biochemical Production - <i>Ali Manesh, American Science & Technology Co.</i> Mechanical Pulp with Added Value Products and Lower COD - <i>Oleg Shagaev, Andritz AG</i>
12:00PM – 1:00PM	18 PEERS Conference Critique Committee Meeting*
12:00PM	PEERS Concludes
1:30PM - 3:00PM	Corrosion & Materials Engineering Steering Committee Meeting*
1:30PM – 3:00PM	IBBC Session 7: Value Added Products Part 2 Session Chair: <i>J. P. Bousquet, Valmet</i>
	Electrochemical Salt Split for Mill Sodium Sulfur Balance Control – <i>Kalle Pelin, AkzoNobel Pulp and Performance Chemicals</i> Imagine Chemistry-An Open Innovation Approach to Sustainability Across the Manufacturing Process - <i>Danny Haynes, AkzoNobel Specialty Chemicals</i> Production of Sulfuric Acid from the Incineration of Pulp Mill Non-Condensable Gases-A biorefinery Concept - <i>Naveen Chenna, Valmet Technologies, OY</i>
3:00PM – 3:30PM	Break

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3:30PM – 5:00PM	IBBC Session 8: NanoTechnology Session Chair: <i>R. Daniel Haynes, AkzoNobel Specialty Chemicals</i>
	TBA Effects of Fiber Morphological Characteristics on Selected Properties of Fiberboard - <i>Babak Mirzaei, Collins Company</i> TBA
5:00	IBBC Concludes

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