



Program, 5th Nordic Wood Biorefinery Conference (NWBC 2014), Stockholm, Sweden, March 25-27, 2014

Version 2014-03-03

March 22-24:

- Designing the Forest Biorefinery – a professional development course

Monday March 24:

- Visit to the LignoBoost demo plant in Bäckhammar
- Evening (17.00-19.30): Open house at Innventia

Tuesday March 25

Conference check-in from 8:00 at Waterfront Congress Centre

Opening – Peter Axegård, Innventia		
9.00-9.05	Welcome	Peter Axegård, Innventia, Sweden
9.05-9.30	Opening speech. Stora Enso: Rethinking our market positioning from ligno-cellulosic feedstocks	Mikael Hannus, Stora Enso
Market and strategy – Annita Westenbroek, Dutch Biorefinery Cluster		
9.30-9.55	Linking analyses of material flow and markets to inform Canadian forest biorefinery development	Saeed Ghafghazi, Queen's Institute, Canada
9.55-10.20	A sustainable strategy for the forest biorefinery	Mariya Marinova, Polytechnique Montreal, Canada
<i>10.20-10.45</i>	<i>Break</i>	
10.45-11.05	Creating a profitable biorefinery - The toolbox for success	Peter Flippo, Arizona Chemical
Biorefinery products I – Lignin – Christine Chirat, Grenoble INP-Pagora		
11.05-11.30	Functional polymers derived from lignosulfonates	Gibson Nynhongo, BOKU, Vienna, Austria
11.30-11.55	Preparation of carbon adsorbents from technical lignins by phosphoric acid activation	Alexander Puziy, Institute for Sorption and Problems of Endoecology, Ukraine
<i>11.55-13.25</i>	<i>Lunch and Poster session 1</i>	

13.25-13.50	Towards thermoplastic lignin polymers; Progress in the utilization of kraft lignin for the synthesis of heat stable polymer melts	Dimitris Argyropoulos, NC State University, Raleigh, USA
13.50-14.15	Lignin structure: re-examination of current paradigms through NMR analysis	Claudia Crestini, Tor Vergata University, Italy
Biorefinery products II – Jim Parkås, Södra		
14.15-14.40	Spruce bark biorefinery	Katariina Kemppainen, VTT, Finland
<i>14.40-15.05</i>	<i>Break</i>	
15.05-15.30	A strong fiber made from nano-fibrillar cellulose in a scalable and parallelisable process	Fredrik Lundell, KTH, Sweden
15.30-15.55	Sulphur-free cooking for added value cellulose	Katarina Karlström, Innventia, Sweden; Waltraud Vorwerg, Fraunhofer, Germany
15.55-16.20	Fish feed from wood	Björn Alriksson, SP Processum, Sweden

19:00 Conference dinner at the Vasa Museum with guided tour of the world's only preserved 17th century warship.

Wednesday March 26

Biorefinery concepts I – Large research programmes – John Kettle, VTT		
8.30-8.55	FuBio programs: Building a bridge from pulp mills to new business and new markets using cellulose and lignin	Markku Leskelä, FIBIC, Finland
8.55-9.20	Future Biorefinery (FuBio) research into process concepts – early stage process evaluation and screening	Eemeli Hytönen, VTT, Finland
9.20-9.45	POLYNOL – chemical intermediates from renewable sources	Niklas Berglin, Innventia, Sweden
9.45-10.05	AFORE: Separation and fractionation processes for present and future pulp mill biorefineries	Anna Suurnäkki, VTT, Finland
<i>10.05-10.30</i>	<i>Break</i>	
Thermal processing and cracking – Niklas Berglin, Innventia		
10.30-10.55	Co-gasification of pyrolysis oil and black liquor: optimal feedstock mix for different raw material cost scenarios	Jim Andersson, Luleå University of Technology, Sweden
10.55-11.20	Kraft lignin depolymerization in near-critical water: Effect of changing co-solvent	Tallal Belkheiri, Chalmers, Sweden
11.20-11.45	Upscaling of the lignin-to-liquid solvolytic conversion to 5-L scale	Tanja Barth, University of Bergen, Norway
11.45-12.10	The Hydrothermal Carbonization (HTC) plant as a decentral biorefinery for wet biomass	Michael Renz, Instituto de Tecnología Química, UPV-CSIC, Spain
<i>12.10-13.10</i>	<i>Lunch</i>	
Biorefinery concepts II – John Schmidt, FPInnovations		
13.10-13.35	Assessment of an organosolv lignocellulose biorefinery concept based on a material flow analysis of a pilot plant	Sophia Laure, Karlsruhe Inst. of Technology; Moritz Leschinsky, Fraunhofer, Germany
13.35-14.00	Acetosolv-process: From the pilot plant to the industrial scale	Alex Berg, UDT, University of Concepcion, Chile
14.00-14.25	WOBAMA - Wood based materials and fuels	Monica Ek, Royal Institute of Technology, Sweden
14.25-14.50	Low cost co-production of cellulose nanofibrils and/or cellulose nanocrystals with biofuels using the AVAP biorefinery technology	Kim Nelson, American Process, USA
<i>14.50-15.15</i>	<i>Break</i>	

15.15-15.40	Update on Virdia's ligno-cellulosic biorefinery platform	Noa Lapidot, Virdia, USA
15.40-16.05	Exergy analysis of an integrated forest biorefinery: An efficient tool to improve the process performance	Radia Ammara, Polytechnique Montreal, Canada
16.05-16.30	Switchable ionic liquids for wood fractionation	Päivi Mäki-Arvela, Aabo Akademi University, Finland

19:00 (sharp) Buffet reception, hosted by the City of Stockholm, at the beautiful Stockholm City Hall, venue for the Nobel Prize banquet

Thursday March 27

Biochemical processing/fermentation – Adriaan van Heinigen, University of Maine		
8.30-8.55	Going from ethanol to a wide array of bio-based products in a biochemical demo plant	Rickard Fornell, SP Technical Research Institute of Sweden
8.55-9.20	Conceptual process design for the production of fermentable sugars in a lactic acid biorefinery	David Sanchez-Garcia, Corbion Purac, The Netherlands
9.20-9.45	Biorefining forest residue using SPORL: Process scale-up design, lignin co-product and high solids fermentation without detoxification	Junyong Zhu, USDA Forest Products Lab., Madison, WI, USA
<i>9.45-10.45</i>	<i>Break & Poster session 2</i>	
Separation processes I – Lignin – Peter Axegård, Innventia		
10.45-11.10	Production of a pure lignin product, Part 2: Separation of lignin from membrane filtration permeates of black liquor	Rufus Ziesig, Innventia, Sweden
11.10-11.35	Commercialisation of the LignoBoost Process	Martin Wimby, Valmet Power, Sweden
11.35-12.00	The SLRP Process – An innovative lignin-recovery technology	Michael Lake, Liquid Lignin Company, USA
<i>12.00-13.00</i>	<i>Lunch</i>	
13.00-13.25	Selected drying technologies for superior product development in the biorefinery	Daniel Frosterud, Christian Berner, Sweden
Separation processes II – Hemicellulose – Adriaan van Heinigen, University of Maine		
13.25-13.50	Recovery of hydroxy acids from soda black liquor	Tuomo Sainio, Lappeenranta University, Finland
13.50-14.15	Hemicelluloses prehydrolysate concentration by nanomembrane filtration: Feasibility and effect of operating conditions	Olumoye Ajao, Polytechnique Montreal, Canada
<i>14.15-14.40</i>	<i>Break</i>	
14.40-15.05	Recovery of highly concentrated hemicellulose fractions from spruce and birch extracts	Mari Kallioinen, Lappeenranta University, Finland
15.05-15.30	Extraction of xylan from bleached hardwood kraft pulp	Antero Varhimo, VTT, Finland
15.30-15.55	Pure xylan from black liquor through new separation technique	Sverker Danielsson, Innventia, Sweden

Closing – <i>Peter Axegård, Innventia</i>		
15.55-16.00	Summing up	Peter Axegård, Innventia, Sweden
16.00-16.05	Announcement of NWBC 2015	Eemeli Hytönen, VTT, Finland