

ISWFPC 2017

19th International Symposium on Wood, Fibre and Pulping Chemistry

August 30 – September 01, 2017 – Porto Seguro, Bahia - Brazil

ISWFPC - Technical Program – Tuesday, Aug. 29, 2017

08:00-18:00hs	REGISTRATION
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ISWFPC - Technical Program - Day 1, Wednesday, Aug 30, 2017

	ROOM - APAGA FOGO (Bridge Session)	ROOM - MUCUGÊ	ROOM - PITINGA
07:30-08:30	REGISTRATION		
08:30-09:15	<p>Plenary Session:</p> <p>Insights into increased reactivity of wood and pulp fibers and their chemical constituents</p> <p><u>Tapani Vuorinen</u>: Aalto University, Finland.</p>		
Topic Session by Room	Pulp Chemistry versus Bleachability and Quality	Pulping	Biorefinery
09:15-10:25	<p>09:15-09:55 Oxygen delignification and TCF-bleaching chemistry – highlights from KTH research projects</p> <p><u>Monika Ek</u> and <u>Torbjörn Reitberger</u>: KTH Royal Institute of Technology, Sweden.</p>	<p>09:15-09:40 Industrial scale polysulfide pulping of eucalyptus</p> <p><u>Otávio Mambrim Filho</u>¹, <u>Bibiana Ribeiro Rubini</u>¹, <u>Leonardo Mendonça Pimenta</u>¹, <u>Markus Paananen</u>², and <u>Jussi Piira</u>²: (1) Fibria Celulose S/A, Brazil; (2) Andritz Pulp & Paper, Finland.</p>	<p>09:15-09:40 Alkaline-sulfite chemithermo-mechanical process as the base for biorefinery of sugarcane bagasse</p> <p><u>André Ferraz</u>, <u>Felipe Reinoso</u>, <u>Fernanda M Mendes</u>, <u>Julio C Santos</u>, <u>Adriane MF Milagres</u>: USP, Brazil.</p>
09:15-10:25	<p>10:00-10:25 Bleaching chemistry in the context of paper conservation</p> <p><u>Ute Henniges</u>, <u>Thomas Rosenau</u>, and <u>Antje Potthast</u>: BOKU University Vienna, Austria.</p>	<p>10:00-10:25 A novel enzymatic approach to delignification and hexenuronic acid removal in cellulosic pulp using a haloperoxidase</p> <p><u>Pedro E. G. Loureiro</u>¹, <u>Valentin Washulin</u>^{1, 2}, <u>Owik M. Herold-Majumdar</u>^{1, 2}, <u>Claus Felby</u>², and <u>Henrik Lund</u>¹: (1) Novozymes A/S, Denmark; (2) University of Copenhagen, Denmark.</p>	<p>10:00-10:25 Study of the effect of green oxidants (ozone and hydrogen peroxide) on contaminants and sugar content of a autohydrolysate produced from hardwood chips</p> <p><u>Christine Chirat</u>¹ and <u>Jérémy Boucher</u>²: (1) Univ. Grenoble Alpes, CNRS, Grenoble INP, France; (2) Fibre Excellence, France.</p>
10:25-10:50	Coffee Break		
Topic Session by Room	Chromophore Formation and Brightness Stability	Pulping	Biorefinery
	<p>10:50-11:30 Analysis of cellulose-derived chromophores by ambient ionization-MS</p> <p><u>Antje Potthast</u>, <u>Andreas Schedl</u>, <u>Thomas Zweckmair</u>, <u>Frauke Kikul</u>, <u>Ute Henniges</u>, <u>Thomas Rosenau</u>: BOKU University Vienna, Austria.</p>	<p>10:50-11:15 Roots and stumps as raw materials to bleached kraft pulp production</p> <p><u>Tiago E. S. Segura</u>, <u>Leonardo R. Pimenta</u>, <u>Francisco B. Mattiazzo</u>, <u>Luzilene O. Souza</u>, <u>Janaina A. Cruz</u>, <u>Suelen M. Annibal</u>, and <u>Alcyale O. Assunção</u>: Eldorado Brasil Celulose, Brazil.</p>	<p>10:50-11:15 Novel process for the co-production of xylo-oligosaccharides, fermentable sugars, and lignosulfonates from hardwood</p> <p><u>Caoxing Huang</u>^{1, 2}, <u>Jing Du</u>², <u>Qiang Yong</u>², <u>Hou-min Chang</u>², and <u>Hasan Jameel</u>²: (1) Nanjing Forestry University, China; (2) N.C. State University, USA.</p>

10:50-12:30	<p>11:35-12:00 Chromophores in celluloses: reactivity and degradation by common bleaching agents</p> <p><u>Nele Sophie Zwirchmayr</u>¹, <u>Ute Henniges</u>¹, and <u>Takashi Hosoya</u>²: (1) BOKU University Vienna, Austria; (2) Kyoto Prefectural University, Japan.</p>	<p>11:35-12:00 High efficiency Lo-solids cooking for mill optimization</p> <p><u>Olavi Pikka</u>¹, <u>Marco Andrade</u>², <u>Ronny Geiger</u>², <u>Viridiane Vianna</u>², <u>Mariana Grotzner</u>², <u>André Ferreira</u>³, <u>Marcelo Bolletta</u>³, and <u>Ricardo Toucini</u>³: (1) Andritz, Finland; (2) Andritz, Brazil; (3) Suzano, Brazil.</p>	<p>11:35-12:00 Borregaard – Continuous development of the biorefinery concept</p> <p><u>Freddy Tjosås</u>, <u>Martin Andresen</u>, and <u>Gudbrand Rødsrud</u>: Borregaard AS, Norway.</p>
	<p>12:05-12:30 Chromophores from hexenuronic acids (HexA) – identification of structures, formation mechanisms, and destruction by peroxide bleaching.</p> <p><u>Thomas Rosenau</u>^{1,2}, <u>Antje Potthast</u>¹, <u>Ute Henniges</u>¹, <u>Takashi Hosoya</u>¹, <u>Nele Zwirchmayr</u>¹, <u>Thomas Dietz</u>³: (1) BOKU University Vienna, Austria; (2) Åbo Akademi University, Finland; and (3) Evonik-Degussa, Germany.</p>	<p>12:05-12:30 Fiberline screenroom improvements and the benefits in pulp quality</p> <p><u>Olavi Pikka</u>, <u>Sami Siik</u>, <u>Marco Andrade</u>, <u>Mariana Grotzner</u>, <u>Leonardo Pimenta</u>, <u>Tiago Segura</u>, <u>Francisco Mattiazzo</u>, and <u>Davi Aparecido</u>: (1) Andritz, Finland; (2) Andritz, Brazil; (3) Eldorado Brasil Celulose, Brazil.</p>	<p>12:05-12:30 Chemical recovery in γ-valerolactone/ water-based biorefinery</p> <p><u>Huy Quang Lê</u>, <u>Juha-Pekka Pokki</u>, <u>Sanna Hellsten</u>, <u>Marc Borrega</u>, <u>Herbert Sixta</u>, and <u>Ville Alopaeus</u>: (1) Aalto University, Finland.</p>
12:30-14:00	Lunch		
Topic Session by Room	Bleaching of Dissolving Pulps	Pulping	Biorefinery
14:00-15:40	<p>14:00-14:40 Ozone-based TCF bleaching of dissolving pulps</p> <p><u>Dominique Lachenal</u>, <u>Jordan Perrin</u>, and <u>Christine Chirat</u>: Grenoble INP-Pagora, France.</p>	<p>14:00-14:25 Effects of localized environment on eucalyptus kraft pulping</p> <p><u>Antonio José Vinha Zanuncio</u>¹, <u>Amélia Guimarães Carvalho</u>¹, <u>Jorge Luiz Colodette</u>²: (1) UFU, Brazil; and (2) UFV, Brazil.</p>	<p>14:00-14:25 Study of different pretreatments (autohydrolysis, autohydrolysis / kraft, autohydrolysis/ NaOH) for the production of bioethanol, furfural and acetic acid from eucalyptus residues.</p> <p><u>Ma. Noel Cabrera</u>, <u>Mairan Guigou</u>, <u>Melissa Bariani</u>, <u>Juan Guarino</u>, <u>Leonardo Clavijo</u>, <u>Mauricio Vique</u>, <u>Mario Daniel Ferrari</u>, <u>Claudia Lareo</u>, and <u>Norberto Cassella</u>: Universidad de la República, Uruguay.</p>
	<p>14:45-15:10 Enzymatic upgrade of eucalypt Kraft paper-grade pulp within dissolving pulp production</p> <p><u>Pedro E. G. Loureiro</u>¹, <u>Sónia M. S. Cadete</u>², <u>Dmitry V. Evtugin</u>², and <u>Henrik Lund</u>¹: (1) Novozymes A/S, Denmark; and (2) University of Aveiro, Portugal.</p>	<p>14:45-15:10 On the reactivity of lignin-carbohydrate complexes (LCCs) under pulping and biorefining conditions</p> <p><u>Nicola Giummarella</u> and <u>Martin Lawoko</u>: KTH Royal Institute of Technology, Sweden.</p>	<p>14:45-15:10 Valorization of lignocellulosic biomass residues via hydrothermal treatment and carbonization</p> <p><u>Hanne Wikberg</u>¹, <u>Stina Grönqvist</u>¹, <u>Matti Siika-aho</u>¹, <u>Andres Kasper</u>², and <u>Tarja Tamminen</u>¹: (1) VTT Technical Research Centre of Finland Ltd, Finland; and (2) Biogold OY, Estonia.</p>
	<p>15:15-15:40 Sustainable pulp bleaching for viscose pulp production</p> <p><u>Alexis Métais</u> and <u>Emil Germer</u>: (1) Xylem, France; and (2) Saint-Petersburg State Forest Technical University, Russia.</p>	<p>15:15-15:40 Wood quality of different pine species aimed at high kappa kraft pulp production</p> <p><u>Renato A. P. Damásio</u>, <u>Flaviana Milagres</u>, <u>Fabício Biernaski</u>, and <u>Janaina Resende de Oliveira</u>: Klabin, Brazil.</p>	<p>15:15-15:40 Furfural production from xylose in a bi-phasic setup using sulphonated materials</p> <p><u>Gerardo Gomez Millan</u>¹, <u>Sanna Hellsten</u>¹, <u>Jordi Llorca</u>², and <u>Herbert Sixta</u>¹: (1) Aalto University, Finland; and (2) Universitat Politècnica de Catalunya, Spain.</p>
15:40-16:00	Coffee Break		
Topic Session by Room	Bleaching for Biorefinery Purposes	Lignin	Biorefinery
	<p>16:00-16:40 Review on the use of bleaching chemicals in biorefineries integrated in cellulose production mills</p> <p><u>Christine Chirat</u>: Univ. Grenoble Alpes, CNRS, Grenoble INP, France.</p>	<p>16:00-16:25 Precipitation of lignin from alkaline ECF bleaching filtrate with ferrous sulphate in alkaline conditions</p> <p><u>Sakari Toivakainen</u>, <u>Heikki Hannukainen</u>, and <u>Olli Dahl</u>: (1) Toihan, Finland; and (2) Aalto University, Finland.</p>	<p>16:00-16:25 Production of activated carbon from fast-pyrolysis biochar</p> <p><u>Pedro Henrique Gonzalez de Cademartori</u>¹, <u>Bruno Dufau Mattos</u>¹, <u>Tainise Vergara Lourençon</u>¹, <u>Andrey Nicolas Harres</u>¹, <u>Gino Capobianco</u>¹, <u>Mailson de Matos</u>, <u>Graciela Ines Bolzon de Muniz</u>¹, and <u>Washington Luiz Esteves Magalhães</u>²: (1) UFPR, Brazil; and (2) Embrapa Florestas, Brazil.</p>

16:00-17:40	<p>16:45-17:10 Effect of autohydrolysis on bleaching ability and on lignin structure</p> <p><u>Hélène Curmi</u>, Christine Chirat, and Dominique Lachenal: Univ. Grenoble Alpes, CNRS, Grenoble INP, France.</p>	<p>16:45-17:10 2,5-Dihydroxy-[1,4]-benzoquinone, a key survivor of bleaching processes</p> <p><u>Nele Sophie Zwirchmayr</u>¹, Ute Henniges¹, Antje Potthast¹, Takashi Hosoya², and Thomas Rosenau¹: (1) BOKU University Vienna, Austria; and (2) Kyoto Prefectural University, Japan.</p>	<p>16:45-17:10 The influence of softwood bark origin on tannin recovery by hot-water extraction</p> <p><u>Tarja Tamminen</u>, Miikka Ruuskanen, and Stina Grönqvist: VTT Technical Research Centre of Finland Ltd, Finland.</p>
	<p>17:15-17:40 Formation and removal of chromophores in cellulosic substrates during oxidation and alkaline treatments</p> <p><u>Dominique Lachenal</u>, Jordan Perrin, and Christine Chirat: Grenoble INP-Pagora, France.</p>	<p>17:15-17:40 Adding speed to analysis of technical lignins</p> <p><u>Antje Potthast</u>, Ivan Sumerskij, Grigory Zinovyev, Irina Sulaeva, Thomas Rosenau: BOKU University Vienna.</p>	<p>17:15-17:40 Application of precipitated xylans from CCE liquor on oxygen delignification and its effects on bleachability, beatability and pulp strength</p> <p>Janaina Resende Demuner¹, Jorge Luiz Colodette², <u>Marcela Freitas Andrade</u>²: (1) Klabin, Brazil S. A.; and (2) UFV, Brazil.</p>
17:40-18:30	Poster session		ISWFPC Official Opening Ceremony and Welcome Cocktail

ISWFPC - Technical Program - Day 2, Thursday, Aug. 30, 2017

	ROOM - APAGA FOGO	ROOM - MUCUGÊ
08:30-09:15		
08:30-09:15	<p>Plenary Session:</p> <p>Cellulose aging and yellowing - analysis and structure of chromophores and molecular mechanisms of their formation</p> <p><u>Thomas Rosenau</u>^{1,6}, <u>Antje Potthast</u>¹, <u>Ute Henniges</u>¹, <u>Takashi Hosoya</u>¹, <u>Nele Zwirchmayr</u>¹, <u>Karin Krainz</u>², <u>Yuko Yoneda</u>³, <u>Thomas Dietz</u>⁴, <u>Alfred D. French</u>⁵: (1) BOKU University Vienna, Austria; (2) Air Liquid Vienna, Austria; (3) Shizuoka University, Japan; (4) Evonik-Degussa, Germany; (5) U. S. Department of Agriculture, USA; and (6) Åbo Akademi University, Finland.</p>	
Topic Session by Room	Lignin Biosynthesis	Nanomaterials
09:20-09:45	<p>Progress on 'zip-lignin' transgenics</p> <p><u>John Ralph</u>¹, <u>Troy Runge</u>¹, <u>Shawn Mansfield</u>², <u>Seema Singh</u>³, <u>Shengfei Zhou</u>¹, <u>Steven Karlen</u>¹, <u>Kwang Ho Kim</u>³, <u>Eliana Gonzales-Vigil</u>², and <u>Gregg Sanford</u>¹: (1) University of Wisconsin, USA; (2) . British Columbia, CANADA; (3) Sandia National Labs and JBEI, USA.</p>	<p>Obtaining nano- and microfibrils of cellulose from industrial waste and their application as packaging material</p> <p><u>Anna Lúcia Mourad</u>¹, <u>Mohamed Naceur Belgacem</u>², and <u>Igor Campos Micadei Bueno</u>³: (1) Institute of Food Technology, Brazil; (2) Institut Polytechnique de Grenoble, France; and (3) UNICAMP, Brazil.</p>
09:50-10:15	<p>Lignin monomers from outside the canonical monolignol biosynthetic pathway</p> <p><u>José C. Del Río</u>¹, <u>Jorge Rencoret</u>¹, <u>Ana Gutiérrez</u>¹, <u>Wu Lan</u>², <u>Hoon Kim</u>², and <u>John Ralph</u>²: (1) IRNAS-CSIC, Spain; and (2) University of Wisconsin, USA.</p>	<p>Production of functionalized nano-crystalline cellulose from pulp and paper mill sludge</p> <p><u>Magdi E. Gibril</u>¹, <u>Prabashni Lekha</u>², <u>Jerome Andrew</u>², <u>Bruce Sithole</u>³, and <u>Deresh Ramjugernath</u>⁴: (1) University of Gezira, Wad Medani, Sudan; (2) Council for Scientific and Industrial Research, South Africa; (3) University of KwaZulu-Natal, South Africa; and (4) University of KwaZulu-Natal, South Africa.</p>
10:20-10:45	<p>Novel synthesis of extracellular lignin in spruce cell culture unravels native lignin carbohydrate bond formation (LCC formation)</p> <p><u>Lawoko Martin</u>¹, <u>Giumarrella Nicola</u>¹, and <u>Kärkönen Anna</u>²: (1) Royal Institute of Technology, Sweden; and (2) Natural Resources Institute Finland (Luke) Green Technology, Finland.</p>	<p>Production, characterization and application of LCNF and CNF in nanostructured packaging papers</p> <p><u>Iara Fontes Demuner</u>¹, <u>Jorge Luiz Colodette</u>¹, and <u>Fernando José Borges Gomes</u>²: (1) UFV, Brazil; and (2) UFRRJ, Brazil.</p>
10:45-11:15	Coffee Break	
11:15-11:40	<p>Visualization of the distribution of stable isotope-labelled-monolignols in woody tissue by isotope microscopic observation</p> <p><u>Keiichi Koda</u>¹, <u>Mayu Ogawa</u>¹, <u>Kengo Shigetomi</u>¹, <u>Naoya Sakamoto</u>¹, <u>Arata Yoshinaga</u>², <u>Keiji Takabe</u>², and <u>Yasumitsu Uraki</u>¹: (1) Hokkaido University, Japan; and (2) Kyoto University, Japan.</p>	<p>Fabrication of light-triggered AuNP/CNC/SMP nano-composites</p> <p><u>Shiyu Fu</u>, <u>Zhijuan Hu</u>, and <u>Aimin Tang</u>: South China University of Technology, China.</p>
11:45-12:10	<p>Complete depolymerization of vanilla seed coat lignin to monomeric phenylpropanoids</p> <p><u>Yanding Li</u>, <u>Shuai Li</u>, <u>Hoon Kim</u>, and <u>John Ralph</u>: University of Wisconsin, USA.</p>	<p>3D-Structured cellulose biofilms and applications</p> <p><u>Luiz G. Greca</u>, <u>Janika Lehtonen</u>, <u>Blaise L. Tardy</u>, and <u>Orlando J. Rojas</u>: Aalto University, Finland.</p>
12:15-12:40	<p>"Rule" of lignin chemical structure found in unusual type of reaction woods</p> <p><u>Yuji Matsumoto</u>¹, <u>Deded Sarip Nawawi</u>², <u>Takuya Akiyama</u>¹, and <u>Tomoya Yokoyama</u>¹: (1) University of Tokyo, Japan; and (2) Bogor Agricultural University, Indonesia.</p>	<p>Fluorine group surface-functionalized cellulose nanocrystals</p> <p><u>Lucian Lucia</u>¹, <u>Hasan Jameel</u>¹, <u>Lokendra Pal</u>¹, and <u>Abdus Salam</u>²: (1) NC State University, USA; and (2) Georgia-Pacific, USA.</p>
12:40-14:00	Lunch	
14:00- 14:45	<p>Plenary Session:</p> <p>From dissolving pulp to cellulosic fibers – trends from an industrial perspective</p> <p><u>Andrea Borgards</u>: Lenzing Aktiengesellschaft, Austria.</p>	

Topic Session by Room	Dissolving Pulp	Nanomaterials
14:50-15:15	Response of hardwoods consisting of various lignin structures during totally chlorine-free bleaching of dissolving pulp Ayyoub Salaghi, Roni Maryana, <u>Hiroshi Ohi</u> : University of Tsukuba, Japan.	Enzyme-mediated production of cellulose nanocrystals <u>Valdeir Arantes</u> , Isabella Dias, Germano Siqueira, Renan Nardi, Lisa Alvareli, and Bárbara Pereira: USP, Brazil.
15:20-15:45	Recycling of ionic liquid in cellulose fiber spinning <u>Sanna Hellstén</u> , Sherif Elsayed, and Herbert Sixta: Aalto University, Finland.	Cellulose nanofibrils produced from <i>Cladophora glomerata</i> algae <u>Wenhua Gao</u> , Kefu Chen, Jinsong Zeng, Jun Xu, and Bin Wang: South China University of Technology, China.
15:45-16:15	Coffee Break	
16:15-16:40	A comparative study on the dissolution of different source of commercial dissolving pulp in NaOH/additives aqueous system <u>Yan Shi</u> , Yutao Liao, Jinglei Xie, and Peipei Sun: (1) Tianjin University of Commerce, China; (2) Qingdao University of Science & Technology.	A recyclable paper-based dip catalyst made from palladium nanoparticle-embedded bacterial cellulose and plant fibers Zhouyang Xiang and <u>Fachuang Lu</u> : South China University of Technology, China.
16:45-17:10	Correlating viscosity and GPC values for reliable DP determination of oxidized pulps <u>Sara Zaccaron</u> , Ute Henniges, Antje Potthast, and Thomas Rosenau: BOKU University Vienna, Austria.	Characterization of lignin-based polyester films reinforced with cellulose nanofibers Shogo Taira, Keiichi Koda, Makoto Kurihara, <u>Yasumitsu Uraki</u> : Hokkaido University, Japan.
17:15-18:30	Poster Session	Poster Session
20:00	Gala Dinner	

ISWFPC - Technical Program - Day 3, Friday, Sept. 01, 2017

	ROOM - APAGA FOGO	ROOM - MUCUGÊ
08:30-09:15	<p>Plenary Session:</p> <p>The effect of lignin fine structure on its reactivity</p> <p><u>Yuji Matsumoto</u>: University of Tokyo, Japan</p>	
Topic Session by Room	Lignin Biosynthesis	Biorefinery / Hemicelluloses
09:20-09:45	<p>The application of computational chemistry to lignin</p> <p><u>Thomas Elder</u>¹, <u>Laura Berstis</u>¹, <u>Nele Sophie Zwirchmayr</u>², <u>Gregg T. Beckham</u>¹, and <u>Michael Crowley</u>¹: (1) National Renewable Energy Laboratory, USA; and (2) BOKU University Vienna, Austria.</p>	<p>Chemical modification of xylans to expand their industrial application</p> <p><u>Danila Morais de Carvalho</u>, <u>Jennie Berglund</u>, <u>Mikael Lindström</u>, <u>Francisco Vilaplana</u>: Royal Institute of Technology, Sweden.</p>
09:50-10:15	<p>Function of glucomannan in lignin formation using artificial wood cell wall</p> <p><u>Takahiro Furukawa</u>¹, <u>Arata Yoshinaga</u>², <u>Keiji Takabe</u>², <u>Yutaka Tamai</u>¹, <u>Keiichi Koda</u>¹, and <u>Yasumitsu Uraki</u>¹: (1) Hokkaido University, Japan; and (2) Kyoto University, Japan.</p>	<p>The role of galactose side groups for the degradation properties of galactoglucomannan</p> <p><u>Jennie Berglund</u>, <u>Shoaib Azhar</u>, <u>Jakob Wohlert</u>, <u>Martin Lawoko</u>, <u>Francisco Vilaplana</u>, <u>Gunnar Henriksson</u>, and <u>Mikael Lindström</u>: KTH - Royal Institute of Technology, Sweden.</p>
10:20-10:45	<p>How linear is milled wood lignin?</p> <p><u>Mikhail Balakshin</u>¹, and <u>Ewelyn Capanema</u>²: (1) BOKU University Vienna, Austria; and (2) NCSU, USA.</p>	<p>Transparent nf-2,3-dicarboxyl cellulose aerogels equipped with up-converting lanthanide-doped cubic NaYF₄ nanocrystals: New developments towards bio-based true volumetric displays</p> <p><u>Falk Liebner</u>, <u>Sven Plappert</u>, and <u>Sakeena Quraishi</u>: BOKU University Vienna, Austria.</p>
10:45-11:15	Coffee Break	
Topic Session by Room	Lignin Preparation	Analytical
11:15-11:40	<p>Decolorization of lignin for material use</p> <p><u>Stefan Böhmendorfer</u>, <u>Oliver Musl</u>, <u>Antje Potthast</u>, <u>Thomas Rosenau</u>: BOKU University Vienna, Austria.</p>	<p>Study on the origins of thioacidolysis dimers</p> <p><u>Fachuang Lu</u>¹, <u>Fengxia Yue</u>², <u>Runcang Sun</u>¹, and <u>John Ralph</u>²: (1) South China University of Technology, China; and (2) University of Wisconsin, USA.</p>
11:45-12:10	<p>Membrane filtration of LignoBoost kraft lignin: Properties of the low molecular weight fraction</p> <p><u>Selda Aminzadeh</u>¹, <u>Maris Lauberts</u>², <u>Galina Dobeleva</u>², <u>Jevgenija Ponomarenko</u>², <u>Tuve Matsson</u>³, <u>Olena Sevastyanova</u>¹, <u>Mikael Lindström</u>¹: Royal Institute of Technology, Sweden; (2) Latvian State University of Wood Chemistry, Latvia; and (3) Chalmers University of Technology, Sweden.</p>	<p>The corrected pore size distribution for cyclohexane - imbibed pulp fibers</p> <p><u>Thad Maloney</u> and <u>Most Kaniz Moriam</u>: Aalto University, Finland.</p>
12:15-12:40	<p>Lignin solvolysis study</p> <p><u>Aurelie Galfre</u>¹, <u>Emilie Gagniere</u>¹, <u>Isabelle Pitault</u>¹, <u>François Puel</u>², and <u>Tayakout</u>¹: (1) Univ. Lyon LAGEP, France; and (2) Univ. Paris Saclay CentraleSupélec LGPM, France.</p>	<p>Characterization and elimination of undesirable protein residues in plant cell walls, and enhancing lignin analysis</p> <p><u>Hoon Kim</u>¹, <u>Yanding Li</u>¹, <u>Dharshana Padmakshan</u>¹, <u>Ron Hatfield</u>², and <u>John Ralph</u>¹: (1) University of Wisconsin, USA; and (2) ARS-DFRC, USA.</p>
12:40-14:00	Lunch	
Topic Session by Room	Lignin Products	Lignin Based Resins
14:00-14:25	<p>Lignin as a functional component in thermoplastic products</p> <p><u>Tiina Liitiä</u>, <u>Kirsi Immonen</u>, <u>Christiane Laine</u>, <u>Jarmo Ropponen</u>, <u>Pia Willberg-Keyriläinen</u>, <u>Hanne Wikberg</u>, <u>Anna-Stiina Jääskeläinen</u>, and <u>Tarja Tamminen</u>: VTT Technical Research Centre of Finland Ltd, Finland.</p>	<p>Epoxy resins from eucalyptus and spruce lignin fractions: designing the properties of the material</p> <p><u>Claudio Gioia</u>, <u>Lars Berglund</u>, and <u>Martin Lawoko</u>: KTH Royal Institute of Technology, Sweden.</p>

14:30-14:55	Lignin assembly in nanostructured films and coatings Luiz G. Greca ¹ , Oriol Cusola ² , Blaise L. Tardy ¹ , Mariko Ago ¹ , <u>Orlando J. Rojas</u> ¹ : (1) Aalto University, Finland; and (2) Universitat Politècnica de Catalunya (UPC), Spain.	CatLignin - reactive lignin for wood adhesives <u>Juha Leppävuori</u> , Hanne Wikberg, Taina Ohra-aho, and Tiina Liitiä: VTT Technical Research Centre of Finland Ltd, Finland.
15:00-15:25	Design of hybrid materials from technical lignins for sorption of heavy metals and organic pollutants Tetyana Budnyak ^{1,2} , Selda Aminzadeh ² , Ievgen Pylypchuk ¹ , Valentin Tertykh ¹ , Mikael E. Lindström ² , and <u>Olena Sevastyanova</u> ² : (1) Chuiko Institute of Surface Chemistry of NAS, Ukraine; and (2) KTH - Royal Institute of Technology, Sweden.	Efficient applications of Omno polymers in phenol-formaldehyde adhesive blends <u>Ewellyn Capanema</u> ¹ and Mikhail Balakshin ² : (1) NCSU, USA; (2) BOKU University Vienna, Austria.
15:30-16:00	Coffee Break	
16:00-16:25	Lignin-based carbon fiber precursors readily prepared by dry-jet wet-spinning <u>Jenny Bengtsson</u> ¹ , Carina Olsson ¹ , Tobias Köhnke ¹ , Hans Theliander ² : (1) Swerea IVF, Sweden; and (2) Chalmers University of Technology, Sweden.	A novel phenolation process for improving lignin reactivity towards thermosets application Xiao Jiang, Jie Liu, Xueyu Du, Zhoujian Hu, <u>Houmin Chang</u> , and Hasan Jameel: North Carolina State University, USA.
16:30-16:55	Fractionation of technical lignins for more efficient uses in biofuels and bio-based materials Ayumu Tagami ^{1,2} , Claudio Gioia ² , Rosana Moriana ² , Mikael E. Lindström ² , and <u>Olena Sevastyanova</u> ² : (1) KTH Royal Institute of Technology, Sweden; and (2) Nippon Paper Industries Co., Ltd, Japan.	Lignoboost Kraft lignin in thiol-ene thermoset resins: fractionation, modification, and curing <u>Marcus Jawerth</u> , Claudio Gioia, Mats Johansson, and Martin Lawoko: KTH Royal Institute of Technology, Sweden.
17:00-17:25	Different strategies for the heterogeneous catalytic conversion of kraft lignin <u>Denilson da Silva Perez</u> ¹ , Sandra Tapin-Lingua ¹ , Raphaëlle Kieffer ² , Bruno Andrioletti ² , Andréia Nunes-Coelho ³ , Véronique Dufaud-Niccolai ³ , Sebhat Woldemichael ⁴ , Cédric Cabral-Almada ⁴ , Pascal Fongarland ⁴ , Laurent Djakovitch ⁴ : (1) FCBA, InTechFibres, France; (2) ICBMS, Université Claude Bernard Lyon1, France; (3) C2P2, ICBMS, France; (4) IRCELyon - Université Lyon 1, France.	Studies on process conditions of lignin-based water-absorbent resin <u>Hao Ren</u> , Dongliang Xu, and Shuang Qian: NanJing Forestry University, China.
17:30	Closing Ceremony	