EWLP2012 PROGRAMME

Tuesday 28.8.2012

9.00       Opening of EWLP2012

9.10       Opening Speech
Vice-Rector Martti Raevaara, Aalto University, Finland

Chemistry of Biomass Deconstruction and Fractionation
Chair: Thomas Rosenau

9.25       O1: Steam pretreatment of softwood, hardwood and mixed wood fractions
Bodo Saake
University of Hamburg, Germany

9.50       O2: Extraction of xylans from birch using pH buffered pressurised hot water
Petri Kilpeläinen
Finnish Forest Research Institute, Finland

10.15      Coffee

Chemistry of Biomass Deconstruction and Fractionation
Chair: Bodo Saake

10.45      O3: Use of carbonium ion scavengers in the pretreatment of spruce wood
Thomas Pielhop
ETH Zürich, Switzerland

11.10      O4: Fractionation of technical lignins for improvement of their antioxidant
properties
Tatiana Dizhbite
Latvian State Institute of Wood Chemistry, Latvia

11.35      O5: Cellulose extraction from spruce sawdust with 1-allyl-3-methylimidazolium chlorite
Alistair King
University of Helsinki, Finland

12.00      Lunch

Chemistry of Biomass Deconstruction and Fractionation
Chair: Ilkka Kilpeläinen

13.00      O6: Molten inorganic salts hydrates: an alternative to room temperature ionic
liquids for high efficiency pretreatment of lignocellulosic biomass
Didier Bernard
IFP Energies Nouvelles, France

13.25      O7: The effects of pretreatment of wood with ionic liquids in the presence of
water
Joern Viell
RWTH Aachen University, Germany

13.50      O8: Ionic liquid-based delignification of biomass
Jason Hallett
Imperial College, UK

14.15      Coffee and Poster Session I
Future Raw Materials
Chair: Christine Chirat
15.15  O9: Process development for high-solid enzymatic conversion of lignocellulose within a biorefinery
Susanne Zibek
University of Stuttgart, Germany
15.40  O10: Biopretreatment optimization and proteomic studies from Irpex lacteus cultures on wheat straw for bioethanol production
Davinia Salvachúa
CSIC, Spain
16.05  O11: Structural characterization of lignin isolated from ball-milled wheat straw
Florian Zikeli
Vienna Technical University, Austria
16.30  O12: High water content microemulsions in a novel method for wood pretreatment and extraction
Carlos Carrillo
North Carolina State University, USA
17.00  End of the Day

Wednesday 29.8.2012

White Biotechnology Concepts
Chair: Monica Ek
8.30  O13: Partial enzymatic cellulose hydrolysis in ionic liquids
Ronny Wahlström
VTT, Finland
8.55  O14: Progress in laccase catalysed oxidation of lignin
Maija-Liisa Mattinen
VTT, Finland
9.20  O15: Enzymatic hydrolysis of hardwood and softwood biomass fibers released by SO₂-ethanol-water fractionation
Minna Yamamoto
Aalto University, Finland
9.45  Coffee

Advances in Pulping and Bleaching Chemistry
Chair: Arnis Treimanis
10.15  O16: Cellulose microfibril aggregation in water – effects of pH, temperature and treatment time
Raili Pönni
Aalto University, Finland
10.40  O17: Effect of xylan structure on tensile strength
Daniel Tavast
KTH, Sweden
11.05  O18: Xylan contribution to the brightness development and stability in the final ECF bleaching of eucalypt kraft pulp
Pedro Loureiro
University of Aveiro, Portugal
11.30  O19: Effect of urea on cellulose degradation under conditions of alkaline pulping
Olga Ershova
Aalto University, Finland
12.00 Lunch

**Advances in Pulping and Bleaching Chemistry**

*Chair: Herbert Sixta*

13.00 O20: **Bio-bleaching of eucalypt kraft pulp with integrated POM-catalyzed ozone stage**

*Anatoly Shatalov*
Technical University of Lisbon, Portugal

13.25 O21: **The role of Donnan effect in kraft liquor impregnation and hot water extraction**

*Susanna Kuitunen*
Aalto University, Finland

13.50 O22: **Characterization of lignin in wood and pulps from Eucalyptus globulus heartwood and sapwood**

*Ana Lourenço*
Technical University of Lisbon, Portugal

14.15 Coffee and Poster Session II

**Sophisticated Analytical Methods**

*Chair: Elisabeth Sjöholm*

15.15 O23: **A multifunctional Py-GC/MS system as tool for quickly providing insights into the chemistry of polymeric natural materials and their products**

*Elisabeth Windeisen*
Holzforschung München, Germany

15.40 O24: **Identification of trace chromophores: on yellowing effects and color formation from hexeneuronic acids**

*Thomas Rosenau*
BOKU University, Austria

16.05 O25: **NMR of whole plant material provides evidence for extensive oxidative modification of lignin during enzymatic treatment**

*Angel Martínez*
IRNAS-CSIC, Spain

16.30 O26: **Dissolution of pulp fibers studied with NMR methods**

*Tommi Virtanen*
University of Helsinki, Finland

17.30 Busses leave to the Museum of Technology

18.00 Aperitif at the Museum of Technology (Viikintie 1)

19.00 EWLP2012 Dinner at Restaurant Koskenranta (Katariina Saksilaisenkatu 9)

**Thursday 30.8.2012**

**Sophisticated Analytical Methods**

*Chair: Dmitry Evtuguin*

8.30 O27: **New insights into natural aging of cellulosic materials**

*Antje Potthast*
BOKU University, Austria
8.55  O28: Extent of peak broadening in the gel permeation chromatography of cellulose dissolved in LiCl/DMAc applying narrow pullulan standard calibration
Lasse Tolonen
Aalto University, Finland

9.20  Coffee and Poster Session III

Reconstruction to Novel Materials
Chair: Dominique Lachenal

10.20  O29: Towards high value lignin thermoplastic polymers; Part 1: The selective masking of phenolic hydroxyl groups in kraft lignin
Dimitris Argyropoulos
North Carolina State University, USA

10.45  O30: Targeted modification of kraft lignin for valuable applications
Dmitry Evtuguin
University of Aveiro, Portugal

11.10  O31: Influence of molar mass distribution on the rheological behavior of cellulose/ionic liquid solutions during dry-jet wet spinning process
Anne Michud
Aalto University, Finland

11.35  O32: Extraction of hemicelluloses from Eucalyptus globulus woodchips for their valorisation into surface-active agents
Marion Sanglard
Grenoble INP-PAGORA, France

12.00  Lunch

Reconstruction to Novel Materials
Chair: Anna-Stiina Jääskeläinen

13.00  O33: Nanotribology as a tool for designing biomimetic cellulose based nanocomposites
Monika Österberg
Aalto University, Finland

13.25  O34: Paper functionalization by means of enzymatic surface treatments using hydrophobic compounds and lignosulfonates
Oriol Cusola
ETSEIAT - UPC, Spain

13.50  O35: Water-based process for making antibacterial fibres
Monica Ek
KTH, Sweden

14.15  O36: Cell scaffolding, hemocompatible cellulose phosphate aerogels for in vivo preparation of bone tissue
Falk Liebner
BOKU University, Austria

14.40  Closing, Poster Awards, Announcement of EWLP2014

15.00  End of EWLP2012