

## **Publications by the partners involved in FP0901 in the field of the Action: year 2010**

### **Articles and book chapters**

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Effect of glutaraldehyde modification on the dynamic vapour sorption behaviour of Scots pine wood. Yanjun Xie, Callum A.S. Hill, Zefang Xiao, Holger Militz & Carsten Mai. Proceedings of the Fifth European Conference on Wood Modification, Riga, Latvia, pp. 81-87 (2010) [ISBN 978-9984-49-135-6],

Susanna Kuitunen, Anna Kalliola, Tarja Tamminen, Stella Rovio, Tiina Liitiä, Taina Ohra-aho, Tuula Lehtimaa, Ville Tarvo, Tapani Vuorinen, Ville Alopaeus, Lignin oxidation mechanisms under oxygen delignification conditions - Reaction pathways and modeling, 11th European Workshop on Lignocellulosics and Pulp, 16-19.8. 2010, Hamburg, Germany, 117-120.

Jarmo Ropponen, Lea Räsänen, Stella Rovio, Taina Ohra-aho, Tiina Liitiä, Daniel van de Pas, Tarja Tamminen, Solvent extraction as a means of preparing homogeneous lignin fractions, 11th European Workshop on Lignocellulosics and Pulp, 16-19.8. 2010, Hamburg, Germany, p. 69-72.

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## **Workshops organised by FP0901**

### **Vienna seminar February 2010**

C. Hill, Cell accessibility

S. Harding, G. Morris, Hydrodynamic analysis of the size distribution, conformation and integrity of polysaccharides

L. Pitkänen, L. Virkki, M. Tenkanen, P. Tuomainen, Remarks on multidetector HPSEC characterization of native and enzymatically modified cereal arabinoxylans

F. Aldaeus, A. Jacobs, Validation and optimization of analytical methods for samples from the wood-based biorefinery

I. Körner, Adwiraah, Heerenklage, R. Janzon, Sieker, B. Saake, Requirement for characterization of biorefinery residues

T.A. Lestander, Biomass characterization by NIR techniques

J. Puls, B. Saake, Lignocellulose biorefinery. Conversion of wood into platform chemicals after organosolv pre-treatment

M. Brebu, C. Vasile, Y. Yanik, Thermal behaviour/ treatment of some vegetable residues b. gas chromatographic analysis of pyrolysis products from pine cone

A.S. Jääskeläinen, R. Hatakka, A. Kivioja, A. Harju, J. Partanen, M. Venäläinen, A rapid method to determine pinosylvin content in pine heartwood by UV resonance Raman spectroscopy

C. Crestini, M. Sette, R. Wechselberger, R. Saladino, Lignin characterization by <sup>31</sup>P-NMR and Q-HSQC

E.G. Koukios, New analytical approaches for the assessment of biorefinery residues - The case of lignocellulosics

M. Arshadi, Determination of volatile organic compounds emitted from softwood pellets during storage

K. Niemelä, T. Tamminen, T. Ohra-Aho, Characterization of black liquor components

D.S. Argyropoulos, Development & applications of <sup>31</sup>P-NMR spin trapping; towards a detailed understanding of the radical mechanism of the action of oxidative enzymes

### Poster presentations

M. Brebu, C-M. Popescu, M-C. Popescu, C. Vasile, S. Willför, Thermal behaviour/treatment of some vegetable residues. IV Thermal characterization of the eucalyptus wood

S. Voorspoels, Analytical tools

S-L. Chong, T. Nissilä, R. Ketola, S. Koutaniemi, M. Tenkanen, P. Tuomainen, Atmospheric Pressure Matrix Assisted Laser Desorption/Ionization (AP-MALDI) combined with Ion Trap Mass Spectrometer (ITMS) – a New Technique for Fingerprinting and Structural Analysis of Plant Derived Oligosaccharides

C. Vanderghem, N. Jacquet, C. Blecker, M. Paquot, Pretreatments and enzymatic hydrolysis of *Miscanthus x giganteus* for oligosaccharides production: delignification degree and characterisation of the hydrolysis products

Hromadkova, Plants as a resource of biopolymers and dietary fibers

B. Westereng, V. Eijssink, P. Nielsen, S. Horn, A state-of-the-art steam explosion unit at the Norwegian University of Life Sciences - Solubilization of carbohydrates, formation of inhibitors and analyses of complex samples

L. Dumitrescu, V. Popa, C. Draghici, G. Coman, I. Manciulea, M. Sica, A. Sauciuc, Contribution regarding the characterization of some lignosulfonates

N. Vrchotová, B. Šerá, Allelopathy properties of Japanese Knotweed extracts

A. Toledano, A. Garcia, R. Llano-ponte, J. Labidi, Lignin fractionation. Comparative study between two different methods: ultrafiltration and selective precipitation

C. Draghici, C. Dima, C. Jelescu, G. Coman, L. Dumitrescu, M. Sica, I. Manciulea, Uncertainty estimation of phenolic compounds determination in standard solutions

D. Silva Pereza, A. Guillemaina, S. Briandb, C. Laboubéeb, F. Labaletteb, J-P. Leygueb, B. Chabbertc, C. Dupondt, Evaluation of biomass quality for the production of second-generation biofuels: process requirements x analytical techniques

### **Hamburg seminar August 2010**

F. Bertraud, Characterisation of industrial barks for their tannin contents for further green-wood based adhesives

P. Su, Sorption of metal ions by bark

D. Perdikis, Evaluation of the Birch Tar Oil potential on the control of the insect pest *Myzus persicae* (Sulzer) (Homoptera: Aphididae)

M. Orlandi, Chemical characterization of lignin from annual plant

P. Niemi, Cereal by-products as raw material for biorefineries

J. Gravitis, Steam exploded wood and non-wood lignins as an example for components of potential biorefinery complex

J. Ponomarenko, Antioxidant properties of soda lignins from non-woody plants in relation to their chemical structure and heterogeneity

I. Johnsen, Chemical characterization of non-wood raw materials

M. Lawther, Invited lecture: Overview on fractionation processes for cereal brans

J. Krogell, Hot water extraction of hemicelluloses from inner and outer bark of Norway spruce

R. Gosselink, Alkaline pretreatment of wheat straw

#### Poster presentations

A. Abaecherli, The coordination efforts of the International Lignin Institute for lignin and lignin analysis, including also agricultural plant lignins

T. Tamminen, Advanced methods to interpret lignin <sup>31</sup>P NMR spectra

D. Kalemba, Isolation and identification of volatile organic compounds from seeds of coniferous trees

N. Jacquet, Influence of steam explosion pretreatment on the thermal degradation of cellulose fibres

M. Kostic, Characterization of the electric properties of hemp fibres

A. García, Effect of ultrasound on the organosolv pulping liquor

A. Pakarinen, Comparison of carbohydrate analyses methods with three herbaceous plants

C. Draghici, Uncertainty estimation for phosphorus determination in standard and wastewater sludge samples

P. Marsik, T. Vanek, Extractive constituents from tree bark