

Curriculum Vitae (Dr. Martin Lawoko)

Academic achievements

1993-1998:

Did my masters in engineering chemistry at Umea University in Sweden.

Late 1998:

Did my masters thesis work at Swedish Pulp and Paper Research Institute (STFI).

The thesis work was on the molar mass characterization of different wood polysaccharides and lignin found in chemically processed pulps.

1999-2000:

Did a basic research project on the enzyme specificity of polysaccharidases. The work was done at the Royal Institute of Technology (KTH), with the then Department of pulp and paper chemistry (Now known as the department of fiber and polymer technology).

2001-2005:

Did my phd thesis on the topic of chemical bonds between lignin and carbohydrates in wood and chemical pulps. The work was done at the Royal Institute of Technology (KTH), with the then department of pulp and paper chemistry (Now known as the department of fiber and polymer technology). It has to do with the chemistry of wood, and how this is affected by its processing. A number of analytical methods in wood chemistry were employed and developed.

2005-2007:

Currently doing my post doctoral work in the U.S.A at the university of Maine, department of chemical and biological engineering, with the group of Dr. Adriaan van Heiningen. The work is sponsored by shell, Amsterdam and is related to biofuel research (alternatives from wood derived chemicals).

Other responsibilities

I am also the acting OBER laboratory manager and analytical chemist and responsible for all instruments in this laboratory. These include HPLC, HPAEC, GC-FID-Headspace, GC-MS, ICAP, IC, TOC/TN analyzer, GPC and UV-VIS, Bio reactors e.t.c. The responsibilities include, maintainance, method development and other research and development applications. I am also involved in the co-supervision of a few masters and PhD students, especially with regard to analytical methods in wood chemistry.

Linguistic skills

Fluent English, fluent Swedish and fluent Acholi (a Ugandan language).
Good Swahili.

List of publications

M. Lawoko, A. Nutt, H. Henriksson, G. Gellerstedt and G. Henriksson. Hemicellulase activity of aerobic fungal cellulases. *Holzforschung* 54 497-500 (2000)

Martin Lawoko, Gunnar Henriksson and Göran Gellerstedt
Enzymatic preparation of lignin and lignin-carbohydrate complexes from kraft and sulphite pulps. Proc. 223rd ACS National Meeting, Orlando, FL, USA (2002)

M. Lawoko, G. Henriksson and G. Gellerstedt, New method for quantitative preparation of lignin-carbohydrate complex from unbleached softwood kraft pulp: lignin-polysaccharide networks I. *Holzforschung* 2003, 57, 69-74.

Lawoko, M., Berggren, R., Berthold, F., Henriksson, G., Gellerstedt, G.
Trend in the Delignification of Lignin-Carbohydrate Complexes During Kraft Cook and Oxygen Delignification of Softwood. 12th International Symposium on Wood and Pulping Chemistry (ISWPC), Madison, U.S.A. Oral Proceedings Vol. 1: 25-28. (2003)

M. Lawoko, R. Berggren, F. Berthold, G. Henriksson and G. Gellerstedt, Changes in the lignin-carbohydrate complex in softwood kraft pulp during kraft and oxygen delignification. *Holzforschung* 2004, 58, 603-610.

Lawoko, M., Henriksson, G., Gellerstedt, G. New method for the quantitative isolation and characterization of lignin-carbohydrate complex from softwood spruce. Proceedings 8th European Workshop on Lignocellulosics and Pulp (EWLP), Riga, Latvia. Oral Proceedings 69-72 (2004)

Camilla Röst, Martin Lawoko and Göran Gellerstedt Structural changes in the residual kraft pulp lignins. Effects of kappa number and degree of oxygen delignification
Nordic Pulp and Paper Research Journal Vol 18 no. 4 (2004)

M. Lawoko, G. Henriksson and G. Gellerstedt, Structural differences between lignin carbohydrate complexes present in wood and in chemical pulps. *Biomacromolecules* 2005, 6, 3467-3473.

Gunnar Henriksson, Martin Lawoko, Maria Christiernin and Marielle Henriksson
Monocomponent endoglucanases- an excellent tool in wood chemistry and pulp processing. 13th International Symposium on Wood, Fibre and Pulping Chemistry (ISWFPC), Auckland, Newzealand. Proceedings Vol. 2: 503-507. (2005)

M. Lawoko, G. Henriksson and G. Gellerstedt, Characterisation of lignin carbohydrate complexes (LCCs) of spruce wood (*picea abies*) isolated with two methods, *Holzforschung* 2006,60 (2), 156-161.

M. Lawoko, Gunnar Henriksson and Göran Gellerstedt. Characterization of Lignin-Carbohydrate Complexes from Spruce Sulphite Pulp: Lignin polysaccharide networks III
Holzforschung 2006,60 (2), 162.

Martin lawoko, Yun Ji and Adriaan van Heiningen. On the importance of lignin-carbohydrate bonds in oxygen delignification. 9th European Workshop on Pulp and Lignocellulosics. **2006** Oral proceedings 76-79

Gunnar Henriksson, Martin Lawoko, Maria Eugenia Eugenio Martin and Goran Gellerstedt. The lignin-carbohydrate network in wood and pulps. A determinant for reactivity. 9th European Workshop on Pulp and Lignocellulosics. **2006** Oral proceedings 99-102