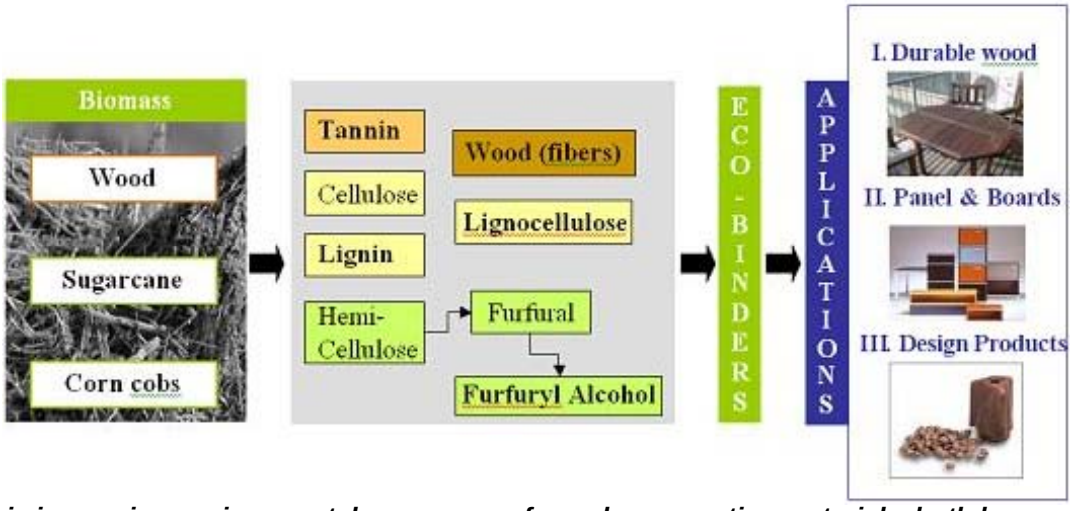
Success story

SHR Timber Research, Wageningen, Netherlands

ECOBINDERS: Eco-friendly, emission free, water resistant, 100% renewable binders

SHR Timber Research is one of the leading partners in a European research project called Ecobinders. In order to achieve the ambitious project goals, a consortium of 15 industrial SMEs, representing the whole chain of raw material suppliers to the final end producers, have joined their efforts. Due to the multi-disciplinary character of the research, a selected group of outstanding universities and RTD performers will collaborate with the industry in this project, including Innovawood members SP Tratek (Sweden), University of Ghent (Belgium), The Royal Veterinary and Agricultural University KVL (Denmark) and EMPA (Switzerland).

Materials Science & Technology



There is increasing environmental awareness of wood preservation materials, both by politicians and the general public. Currently, about 6.5 million m³ preserved wood is produced annually in Europe and has a wide range of common uses. The European consumption of resins, produced from non-eco friendly starting materials, for wood based panel production in 2003 was close to 4 million tons. The ECOBINDERS project aims to introduce environmentally acceptable alternatives into existing and emerging markets, so reducing the amount of toxic materials currently found in every household in Europe significantly.

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The main objectives of the ECOBINDERS project are:

•To develop a new class of biomass based binders consisting of furans and/or sulphur-free lignin

•To develop innovative and sustainable processes for these multifunctional binders by using an integrated chain approach combining multi-sectorial interests

•To develop durable wood : a sustainable alternative for currently used, but strongly debated toxic wood protection agents (e.g. chromated copper arsenic salts)

•To develop emission-free panel & boards for indoor use to replace the traditionally used, formaldehyde releasing, products

•To develop water and organic solvent resistant 3D design products for in- and outdoor use

The first year of the project has seen activities in the following areas:

Raw materials – developing a range of ecobinders based on agriculturally derived furans

Wood modification – based on furfurylation technology employed by WPT (Norway)

Panels and boards – using a range of materials (including modified wood) and binders

3D design – especially extrusion and injection moulding processes for indoor and outdoor products

LCA studies – assessing the impact of processes under development

Further information on the project and the products shown above can be found on the website http:\\www.ecobinders.net.

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