

Biofoambark and TES EnergyFaçade System projects win industry prizes

The German High Tech Champions Award 2012 in Green Buildings – Bâtiment Durable, was given to five outstanding German technology developers from German Universities and Research Institutions. Among the winners there were two WoodWisdom-Net projects: Biofoambark and TES EnergyFaçade System. The leading scientists, University Professor Marie-Pierre Laborie, Institute of Forest Utilization and Works Science, University of Freiburg, and Dipl. Ing. Frank Lattke, Technical University of Munich, were presented with the prize at a festive Award Ceremony on the evening of November 28 at Le Clos des Varennes in France.



The German High Tech Champions at POLLUTEC 2012 - Forum 'La Ville Durable' / 'The Sustainable City': Booth K 163 and Conference on November 28, Lyon. University Professor Marie-Pierre Laborie and Dipl. Ing. Frank Lattke on left. Photo: © www.cedricdarbord.com

Proposals for the award were peer-reviewed and judged on originality, technical, financial, and commercial viability, as well as potential market impact by an independent, bi-national expert panel. **The German High Tech Champions Award** is issued by Fraunhofer, Europe's largest application-oriented research organization. More: <http://www.research-in-germany.de/main/campaigns-activities/59392/ghtc-award.html>

Biofoambark is a project at the Freiburg Materials Research Center that aims to produce insulating foam using extracts from tree bark. The project focuses at developing the chemistry and technology for preparing fully

bio-based tannin foams in order to substitute petroleum based foams. The tannins are extracted from the bark of prevalent softwood species. Further components for the foam formulation like glycerol and furfural are by-products from biodiesel and pulp and paper industry. One aim is to develop foams with excellent properties for application as insulating building materials and for conversion into synthesis gas at the end of the product life. In this project it is also planned to assess the environmental performance, techno-economic feasibility and market potentials of those biomaterials. The consortium is funded by WoodWisdom-Net/

ERA-NET Bioenergy Joint Call starting February 2012 and for a period of three years brings together an interdisciplinary team of 8 European partners. More: www.biofoambark.uni-freiburg.de

TES EnergyFaçade stands for the application of prefabricated timber elements offering solutions for the energy-efficient building envelope refurbishment as well as building extensions. TES EnergyFaçade provides a structured guideline for the application of pre-fabricated, large-sized timber framed elements along the workflow from planning, digital measurement, off-site production, to on-site assembly.



**Top 3 Forschungspreis
„Nachhaltige Entwicklungen“ 2012**
ein Preis des Bundesministeriums für Bildung und Forschung



An apartment building in Germany newly renovated by the TES Energy façade system.

DEMOWOOD

Optimisation of material recycling and energy recovery from waste and demolition wood in different value chains.

This project aims at investigating valorisation concepts for maximising the added value of waste wood in value chains such as pulp production for paper products, particle board production and large scale energy recovery systems: combustion plants and liquid biofuels production.

Launched in 2011, the project has now completed the first step of analysing the situation with waste wood sources and management in the participating countries (France, Germany, Finland) and setting recommendations for improvement. In total, about 40 Mt of recoverable waste wood has been estimated for Europe and contrasted recovery options and regulations have been identified and analysed over the three countries.

An important step forward has also been made concerning the detection of contaminants in waste wood for sorting, with the testing of different spectrometric technologies. Near Infrared Spectrometry has, for example, proved to be very promising in separating solid wood and resin or polymer containing wood materials and wood coated with polymers. Alternative technologies are still being studied and the potential for sorting different classes of waste wood to fit the different requirements of users seems high.

Trials, with encouraging results, have also been performed in order to produce thermo-mechanical pulp with a part of waste softwood window frames. Particle boards made from 100% waste wood have also been produced, using both solid wood waste and used pre-treated coated particle boards. In both cases, the produced materials show acceptable mechanical performance, indicating good potential for increasing the level of waste wood recycling in particle board production. The requirements for CHP plants and liquid biofuels production are also being investigated.

An environmental and economic assessment of the recovery and recycling pathways is underway. In addition, conceptual models of the different recycling or energy recovery pathways have been established and an important data collection phase has been launched.

Coordinator : FCBA, France

Contact : Gerard Deroubaix, gerard.deroubaix@fcba.fr
Partners : PTS, Germany – WKI, Germany – CTP, France – VTT, Finland - Norske Skog, Golbey Mill, France - Entsorgungstechnik Bavaria GmbH, Germany - Lassila & Tikanoja Oyj, Finland - Finnish Wood Research, Finland - RTT Steinert GmbH, Germany - Schumann-Analytics, Germany - Pfeiderer Holzwerkstoffe GmbH, Germany - SITA Recyclage, France – VEOLIA, France

Web : www.wwnet-demowood.eu