FPL NEWS

Recent developments from the Forest Products Laboratory

FPL Receives $1.7 Million for Nanotechnology Research Equipment

The Forest Products Laboratory received $1.7 million for equipment to aid research in the emerging field of nanotechnology. The funding will allow for the purchase, engineering, and installation of four glass-lined reactors (two 100-gallon, one 1,000-gallon, and one 1,500 gallon) and a filtration system, which will be used to produce cellulose nanocrystals (CNCs). Scientists hope to be able to use the high strength of CNC's to produce high-performance composite materials, including application that require high clarity, such as ballistic glass.

FPL Research Making Its Way to the Marketplace

The Forest Products Laboratory has been involved in research to develop three-dimensional molded fiber structures using waste materials since the 1980's. At that time, "green" characteristics did not bring a premium and commercialization efforts were unsuccessful; however, research continued on 3-D structural panels. In 2006, commercial partners again sought out FPL to see what developments had been made, and found 3-D Engineered Fiberboard to be cost effective and appealing to a market that was turning toward greener materials. From 2006-2008, FPL worked with Noble Environmental Technologies Corporation to move the technology from the lab to commercial start-up, and Noble has since demonstrated the potential of this FPL-produced material by developing many useful applications. An article in Surface & Panel magazine highlighting the commercial products and potential of these materials can be found at http://www.surfaceandpanel.com/articles/tech-spec/shape-green-come

TAPPI Research Management Committee Convenes at FPL

The TAPPI International Research Management Committee (IRMC) gathered at FPL in early November. The TAPPI IRMC is comprised of about 45-55 senior research leaders from pulp and paper industries, federal research laboratories, and major pulp and paper university research centers world-wide. Members from the United States, Brazil, Canada, China, Finland, Sweden, and the United Kingdom were present at the meeting.

The TAPPI IRMC focuses on new and emerging research trends and frontiers affecting the industry, as well as focusing on ways to improve the performance and accountability of the research and development community that serves the pulp and paper industry. The focus of this meeting had two themes: 1) bioenergy, and 2) best practices for managing research, development and technology transfer.

The highlight of the meeting was a tour of Virent Energy Systems. Virent is commercializing an innovative advanced biofuel technology that catalytically transforms a wide range of soluble plant sugars into hydrocarbon molecules. The BioForming® technology combines aqueous phase reforming (APR) and traditional petroleum refining technologies to generate hydrocarbon molecules. Gasoline was the first liquid fuel Virent produced using this technology, followed shortly thereafter by diesel and jet fuel.

TAPPI's aim is to promote research and education, and to arrange for the collection, dissemination and interchange of technical concepts and information in fields of interest to its members. The next TAPPI IRMC full meeting will be held in Brazil in 2011.

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"Green" Home Design Challenge Announced

Who can design a home with the lowest carbon footprint? That's the challenge being presented in the Florida Carbon Challenge, a design competition to take place throughout Florida in November and December, 2010. The competition is being presented by APA in cooperation with the USDA Forest Service, Forest Products Laboratory (FPL) and the Southern Forest Products Association.

The competition calls for single-family home designs suitable for construction in Northeast Florida. To aid designers in determining how various building components and designs impact the carbon footprint of a home, APA is working with the Athena Institute to provide a Residential Eco-Calculator, a free software tool that uses life cycle assessment (LCA) methodology to determine the environmental impact of design choices. The software will include data for many combinations of common building materials for floors, walls, and roofs, as well as finish materials.

Complete details and design requirements for the challenge are available online at www.apawood.org/carbonchallenge. Entries must be submitted by Dec. 22, 2010. A news release issued on the contest can be found at http://www.fpl.fs.fed.us/news/newsreleases/releases/20101110.shtml

FPL hosts open house on Earth Day 2011

The Forest Products Laboratory is inviting the public to visit our facility during an open house on April 22, 2011. Visitors will have the opportunity to learn about FPL's impact on society as they tour our new Centennial Research Facility, speak with researchers about current projects, and view displays on the accomplishments made over the past century. The event will also feature activities for children and a visit from our friends Smokey Bear and Woodsy Owl. Watch for more information on our website at www.fpl.fs.fed.us

And finally…

Forest Products Laboratory Celebrates 100 Years of Research

FPL officially celebrated its centennial on June 4, 2010. Did you know FPL research during the 1930's was largely responsible for the introduction of modern timber connectors into American construction practice? Metal fasteners, including spiked or toothed plates, plain or toothed rings, or short dowels, had been used in Europe for many years. FPL researchers studied the European types and determined the best types for American use.

100 Years of Service
Forest Products Laboratory
1910 – 2010

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