



March 2008

Coming OWIC events:

April 24-25: Selling Forest Products Corvallis, OR

Inside this Issue:

- Featured researcher** 2
- Ask the expert** 3
- Selling Forest Products** 3
- Biomass update** 4

Is Your Company Looking for Employees?

Is your company looking to hire qualified students with an educational background in forest products?

The Oregon Wood Innovation Center is now your connection to Wood Science and Engineering students at Oregon State University.

OWIC can help connect you with students looking for full-time work, part-time work, and internships. Our undergraduate students have a wide variety of skills placing them in entry level positions in the areas of sales, quality control, management, and research and development. Our graduate students have expertise in a wide variety of fields including wood chemistry, wood anatomy, wood quality, wood products processing, composite materials, and forest products business and marketing.

In addition to full-time work, we

have students looking for part-time work throughout the year. Undergraduate students in the wood science program are required to complete two summer internships as part of their degree. Our students work in internships around the globe in a wide variety of fields.

rent students and alumni of the Department of Wood Science and Engineering.

If you are interested in learning more about how to connect with wood science students for full-time work, part-time work, or internships, contact:

Wood Science & Engineering Jobs and Internships

Please fill out the form below to post available positions (permanent, temporary, and internships) in your organization. The posting will appear on our secure website viewable only by current students in Wood Science & Engineering.

Date posted: (MM/DD/YYYY)

Company:

Job Title:

Type of Position: Permanent Summer/ Seasonal Internship

Wage/ Salary:

Location: City State Country

Start Date: (MM/DD/YYYY) (leave blank if position is open now)

Closing Date: (MM/DD/YYYY) (for applications)

Contact person:

Email:

Phone number:

Website for more info.:

Additional Information:

To attach a position description to display with your posting, please send the file as an attachment to our [Jobs Coordinator](#)

You can now connect with our students using our new secure online jobs board. Simply visit <http://owic.oregonstate.edu/jobs/form.php> and complete the form to advertise open positions. The position will be displayed on a secure website which is viewable only by cur-

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Featured Researcher: Dr. Peter Kitin

The featured researcher for the month of March is Dr. Peter Kitin. Peter is a courtesy faculty member working with Dr. Barb Lachenbruch on a research project that is funded by the Marie Curie Outgoing International Fellowships program of the European Commission and the Royal Museum for Central Africa in Tervuren, Belgium. Peter arrived at OSU in June 2007. He will be at OSU for two years before returning to the Royal Museum for Central Africa in Belgium.

The focus of his current research is on the wood and bark structure in relation to permeability to gas and liquid. This knowledge is important for better utilization of wood products and for further development of the wood drying and preservation technologies. The outcome of the project will also contribute to the fundamental knowledge of tree anatomy and physiology.

His expertise is in the anatomi-

cal analysis of wood structure and development. He has done research on the cambial activity and wood formation; cambium, wood and bark anatomy; morphogenesis of plants propagated in vitro and from cuttings through rooting or grafting. He is interested in methods for three-dimensional visualization of cell and tissue structure, such as optical sectioning by confocal microscopy or microcasting (corrosion casting) with SEM. For microcasting, the woody tissue is perfused with a low-viscosity resin or plastic which fills cell lumens and all void spaces. Then, the resin is polymerized and the cell walls are chemically digested and removed from the sample. What remains is a fine network of microcasts which when visualized by SEM reveal the three-dimensional structure of cell lumens and microcapillarities.

Peter is a native Bulgarian and graduated from the University of Forestry in Sofia, Bulgaria where he worked as assistant professor of bot-



any and wood anatomy. From 1995 until 2007, he lived in Japan where he completed a Ph.D. at Hokkaido University and worked as a postdoc at the Forestry and Forest Products Research Institute in Tsukuba and in the Institute of Wood Technology at Akita Prefectural University.

You can find more information on Peter at <http://woodscience.oregonstate.edu/faculty/gartner/others.htm>. You can also find images from his current research at <http://woodscience.oregonstate.edu/faculty/gartner/microscopic%20images%20PK.html>

Slow markets are a great time to hone selling skills!!!

Personal selling is the primary tool used in marketing most forest products. Yet, very few individuals in the industry have professional sales training when starting their career.

Those attending this short course will learn the basics of personal selling, methods of identifying

new customers, and will analyze their personal selling profile.

The course is designed to improve the efficiency and effectiveness of sales personnel. It is intended for new sales and marketing personnel or those wishing to improve their

selling skills in the forest products industry.

More information on the course is available at: <http://oregonstate.edu/conferences/sellingforestproducts/index.html>.



April 24-25, 2008
Selling Forest Products

Oregon State University - Corvallis, OR

An Innovative Learning Experience

Presented by Oregon State University College of Forestry & College of Business

The Oregon Wood Innovation Center
Connecting people, ideas, resources

Ask the Expert



Have questions related to wood? The faculty of the Wood Science and Engineering Department at OSU have the expertise to handle almost any question about wood. Simply submit your question using the Ask the Expert form (<http://owic.oregonstate.edu/askexpert.php>). In order to assure that your question is answered correctly, please be as specific as possible when submitting your questions.

The following are examples of recent 'Ask the Expert' questions:

Question: I am currently in the process of drying 6x8 Douglas-fir timbers in a dehumidification (DH) dry kiln approx. 100,000BF capacity. Our dry kilns are capable of maintaining a temp of 110 deg F just with the DH unit and no auxiliary heat.

I would like to set the pitch on this material. We normally shut down the DH unit and turn on the auxilliary heat source (Steam Heat) and run up to 180 deg F for about 16 hours.

Can you tell me if it is safer to set the pitch earlier in the schedule or later in the schedule? Should I use some steam injection? Do you have any information on setting the pitch on large timbers such as schedules, temp ,time frames?

Answer: Setting pitch requires driving off the volatile compounds (turpentine, for example)

that allow the pitch to liquefy. The pitch is 'set' to the highest temperature you reach; that is, if the wood gets hotter in-service than the hottest it got in the kiln cycle, the pitch will liquefy again. In that case, the hotter the better.

The Dry Kiln Operator's Manual recommends setting pitch early in the schedule with high temperature (though they don't specify any specific temperature). To minimize checking of course, you'd want to use high humidity as well - so, steam injection may be required. The schedule should finish at at least 170 degrees. And this is a bare minimum temperature for Douglas-fir pitch as it can be harder to set than pitch in pine. I don't think 16 hours would be enough to get the core of a large timber to 170-180 degrees though. We are not aware of any schedules for setting pitch on larger timbers.

Question: What load will the roof on our 40 year old cabin bear? We are concerned about the weight of the snow in this abnormal winter. The roof is rough 4 X 8 Douglas fir, or larch, beams spaced 4 feet apart. The beams are supported at each end by the normal and customary wall framing. The span of the beams is 14 feet. Laid across the top of the beams, perpendicular to them, is 2 x 6 tong and grove western red cedar. The steel roof is fastened to the top of the cedar. The ceiling inside the cabin is the under side of the

cedar. The roof has only a slight slope that allows water to drain. Our Coeur d' Alene paper explains how to figure out the weight of snow, but I need help to know what weight the roof will bear.

Answer: Unfortunately, answers to such questions are not as straightforward as one might expect due to variability in allowable design values based on lumber grade, safety factors, etc. Your best bet is to work with a local consulting engineer on this question; should only require an hour or two.

Question: My Dad received a publication of current log prices for fir, hemlock, spruce and alder. Do you know of any publication that gives that information?

Answer: The Oregon Department of Forestry lists quarterly log prices for Oregon on their Log Price Information page (http://oregon.gov/ODF/STATE_FORESTS/TIMBER_SALES/logpage.shtml).

A comprehensive list of all the 'Ask the Expert' questions with corresponding answers is available at <http://owic.oregonstate.edu/askexpert.php>.

Biomass News

Production/ Collection Tax Credit:

Firms that collect biomass in Oregon for use as biofuel, or that produce biofuel, can claim a credit up to the amount of their tax liability. The credit is claimed in the tax year that the biomass is transferred to a biofuel producer. Biomass is renewable or recurring organic matter and includes forest or rangeland wood debris (wood treated with creosote or inorganic chemical compounds does not qualify).

The credit amounts to \$10 per green ton for woody biomass collected from property in Oregon. Biofuel producers must provide a written receipt at the time of the transfer; the receipt must state the quantity and type of biomass being transferred and certify that the biomass is to be used to produce biofuel.

Credits that exceed a firm's tax liability can be carried forward for four years.

See <https://secure.dor.state.or.us/piti/index.cfm?action=topic&id=128> for more information.

Woody cellulose-to-ethanol:

The first small-scale waste wood-to-ethanol commercial facility in the nation is now in operation. The facility is near Upton, Wyoming and is the result of a joint effort between KL Process Design Group and the South Dakota School of Mines and Technology. The company is using proprietary technologies and newly developed enzymes. The current production facility is using softwoods, but has also been successful in test runs using cardboard and paper.

For more information, see <http://www.klprocess.com/Projects/BiomassProcess.html>.

Also, the U.S. Department of Energy announced the inclusion of Pacific Ethanol in a matching award totaling \$24.32 million to build the first cellulosic ethanol demonstration plant in the Pacific Northwest. The plant will produce ethanol from wheat straw, wood chips and corn stover and will be co-located at the site of Pacific Ethanol's existing corn-based ethanol facility in Boardman, Oregon.

To subscribe to this newsletter send an email to Chris Knowles with "subscribe to newsletter" in the subject line.

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Previous issues of the OWIC newsletter are available at <http://owic.oregonstate.edu/newsletter/>

