Forest&Wood Products Australia
Knowledge for a sustainable Australia

R&DWorks.

R&D Works – March 2016

Welcome to our March edition of the R&D Works newsletter.
This month our stories include a review into the advances of cable-assisted devices in “steeper” terrain logging ; a study into the robustness of RFID log tags in handling and storage; an evaluation of UAVs as an operational support tool providing real-time video feeds in prescribed forest burns; a project utilizing carbon-fibre composites based on 100% wood lignin; and notification of the upcoming closure of the current FWPA R&D project call due 15 March.
I do hope you enjoy reading about these exciting research projects and their applications.

Chris Lafferty
R&D Manager
FWPA

MAIN NEWS

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FWPA call for project funding proposals to close 15 March.

FWPA invites the submission of detailed research proposals for projects commencing from 1 May 2016 addressing published FWPA industry research priorities. Details of current research priorities can be found in the series of industry investment plans available from the FWPA website.
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Low-cost bioactive paper detects blood types in under a minute

Determining a blood type to ensure compatibility ahead of a transfusion isn't straightforward at the best of times, but in regions of the world where proper medical equipment is unavailable it is nigh on impossible. A new bioactive piece of paper promises to change that,

however, with the ability to analyse just a few drops of blood and identify somebody's blood group in as little as one minute.
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Use of remotely piloted aircraft systems for forestry operations and research

Small remotely piloted aircraft systems (RPAS), also known as unmanned aircraft systems (UAS), are expected to provide important contributions to wildland fire operations and research. Actual research on their use and performance, however, has been limited so far.
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Swedish university project to 3D-print houses

Researchers from Umeå University in Sweden are working with external partners to develop a technology to make full-scale 3D prints of cellulose-based material. It is not a matter of small prints – the objective is to make houses.
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TIMBER CONSTRUCTION AND DESIGN

New natural disaster research to improve timber building design

New research involving the University of Canterbury, and funded by the Earthquake Commission, will improve understanding of volcanic eruptions and earthquakes, seismic building design, and enhance risk management and risk communication.
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WOOD HARVESTING TRANSPORT AND LOGISTICS

Will RFID tags remain on logs during handling and storage?

Using RFID tags on logs greatly improves the efficiency of their traceability – but will they remain on the logs in the harsh logging environment? The logging industry has been considering various ways to improve the traceability for high value logs and in ensuring that logs do not originate from illegally logged forests.
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World first self-driving truck on public highway

Daimler Trucks has shifted gears in its ongoing effort to develop autonomous vehicles. By fitting its Highway Pilot self-driving system to a Mercedes-Benz Actros truck and steering it down a stretch of Autobahn 8 in Germany, the company has marked the first time an autonomous production semi has been tested out on public roads.

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FOREST GROWING

Expanding ground-based harvesting onto steep terrain

Timber harvesting on steep terrain has always been, and will remain, a challenge in terms of economic viability, safety and environmental performance. However new technologies, innovations and systems are improving the safety and cost-effectiveness of steep terrain logging.

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All trees break at a fixed speed

During storms, there is a critical wind speed, of around 42 m/s (90 mph), at which almost all tree trunks break – irrespective of their size or species – according to a new study done by researchers in France.

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MARKETS

Paper poised to fill new gaps as insulation

Wood has long been the material of choice for framing, walls, and floors, but designers often fall back on conventional foam insulation to keep the heat in and the elements out. New research from Forest Products Laboratory in the US introduces an insulation system that may help give forest products the green light to fill in new gaps.

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Report highlights critical areas in pellet making process

FutureMetrics released a new report highlighting several critical areas in the process of making wood pellets. Although the process appears simple and straightforward, author and senior consultant John Swaan said the reality is far more complex.
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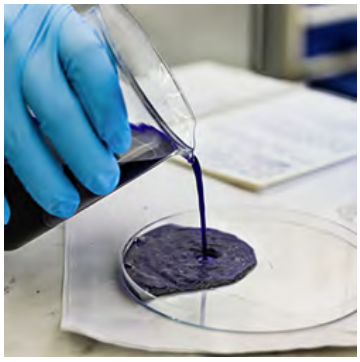
OTHER INFORMATION



Storing electricity in paper

Researchers at Linköping University's Laboratory of Organic Electronics, Sweden, have developed power paper – a new material with an outstanding ability to store energy.
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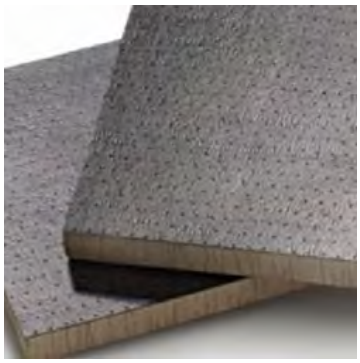

New bio-based lightweight material unveiled

The research institutes Innventia and Swerea SICOMP have worked together to develop the first carbon-fibre composite demonstrator based on 100% wood lignin. The lightweight, fuel-efficient car of the future can be made using this material.
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