

RAIZ



Forest and Paper Research Institute

TECHNOLOGICAL
SCOUTING NEWSLETTER

July and August 2019

FOREST



photo: SINCERE

SINCERE: mapping innovation across Europe

The Spurring INnovations for forest eCosystem sERVICES in Europe (SINCERE) is a four-year project funded through the European Commission's Horizon 2020 programme looking for innovative ways to value and implement "forest ecosystem services" through the development of novel policies and new business models. At its website, SINCERE now makes available an interactive map showing the location of cases compiled in the Inventory of European Innovation Mechanisms for the provision and the enhancement of forest ecosystem services. Innovative Mechanisms are therefore novel policies, business models and other projects or initiatives to support forest management that provides benefits to people.

Read more > [SINCERE](#)



photo: pplware.sapo

Eco Camões: the all-electric Portuguese fire fighting car

A project lead by the Portuguese company Jacinto Marques de Oliveira, Sucurs, Limitada and financed by COMPETE 2020 has resulted in the development of the world's first fully electric unmanned Fire Fighting Vehicle, named Eco Camões. With a capacity of 10,000 l of water, 1,200 l of foam and 250 kg of chemical powder, it is ideal for operating in thin atmospheres (such as tunnel fires) avoiding putting firefighters at risk. The Eco Camões can be controlled from a distance of up to 1 km and, using a control panel, the operator can not only see the entire environment around the truck but also controls the entire extinguishing system (pump, foam system, etc.), the acceleration, braking and steering of the Eco Camões.

Read more > [pplware.sapo](#) | [compete 2020](#)

BIOREFINERY



photo: Vienna University of Technology

Vienna University of Technology opens biorefinery pilot plant

Researchers from the Vienna University of Technology intent to use a new pilot plant to optimize operating parameters such as pressure, temperature, solvent and extraction time, in order to extract high value products from straw, wood waste from sawmills or paper mills, shrubs or biowaste from food production. Researchers from the Vienna University of Technology have already specialized in using a particularly developed system which can reach a pressure of up to 30 bar and temperatures of up to 250 ° C, allowing to deconstruct the lignocellulose in the biomass into its main components of cellulose, hemicellulose and lignin, which can then be converted into, for instance, bioactive substances such as cannabinoids, flavonoids or polyphenols.

Read more > [Vienna University of Technology](#)

● Technological



photo: BioMarketsInsigth

Stora Enso and Valio launch biocomposite lid

Stora Enso continues to show new uses for its developed biocomposite branded as DuraSense. The paper company has now teamed up with the dairy manufacturer Valio through a pilot project for the development of reusable biocomposite lids made of DuraSense and to be used combined with traditional food packaging. Valio intends to distribute 10,000 of these reusable lids to Finnish homes, helping Finns in reducing their food waste and plastic dependency.

Read more > [BioMarketsInsigth](#)

● Technological
● Product Development

BIOREFINERY



photo: Stora Enso

Stora Enso: bio-based carbon materials for energy storage

Stora Enso is investing 10 million € to build a pilot facility for producing bio-based carbon materials based on lignin. Stora Enso plans to pilot the processing of lignin into hard carbon anode materials for lithium-ion batteries with properties similar to graphite. Such batteries are used, such to mention a few of applications, in mobile phones, power tools, electric vehicles, in industrial applications, in stationary energy storage and grid units. The construction of the pilot facility will begin before the end of 2019 and is estimated to be complete by early 2021.

Read more > [Stora Enso](#)

● Technological
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European network LignoCOST for stimulating industrial applications of lignin

A large European network coordinated by Wageningen Food & Biobased Research, the LignoCOST, has been formed to develop a pan-European network to exploit the full industrial potential of lignin applications, covering the entire value chain, from raw materials to cost-effective and sustainable end products. LignoCOST consists of five work programmes, each focused on distinct objectives and results, and more than 200 partners from 38 countries.

Read more > [Wageningen Food & Biobased Research | LignoCOST](#)

● Technological

NEW PAPER BASED PACKAGING



photo: Bosch

Bosch and BillerudKorsnäs: new paper-based packaging concept

A new sustainable packaging concept, branded as Pearl, has resulted from the collaboration efforts on this topic by Bosch and BillerudKorsnäs. The two companies have developed uniquely formed and right-sized small packages, called shaped paper pods, using BillerudKorsnäs's 3D-formable paper FibreForm® and forming, filling and sealing machinery from Bosch Packaging Technology. Bosch and BillerudKorsnäs aim to introduce this new packaging concept to industries like beauty and personal care, bread spreads, savory and confectionery.

Read more > [BillerudKorsnäs | Bosch](#)

● Product Development



photo: packagingnews

Paper Straw Co and BillerudKorsnäs: first functional paper U-Bend straw

BillerudKorsnäs has found a further innovative application of its developed 3D-formable paper FibreForm®, as a functional 180° bendable straw, in collaboration with The Paper Straw Co. The patent pending paper straw, said to be the first that is 180° bendable, is durable, recyclable, biodegradable, and can be used together with existing drink packaging. End-users will be consumers buying individual drink cartons filled with juice, milk or water. The companies say to be ready to go into industrial trials with the goal to be able to commercialize the paper straw by the end of this year.

Read more > [BillerudKorsnäs](#)

● Product Development

NEW PAPER BASED PACKAGING



photo: Ahlstrom-Munksjö

Ahlstrom-Munksjö: new functional and sustainable wax alternative papers

Ahlstrom-Munksjö has launched the ParaFree™ papers which are paraffin wax free, reducing the dependency on petroleum-based ingredients and decreasing the basis weight of the end-use product, resulting in lessening the overall material use and having a positive environmental impact on the supply chain footprint.

The ParaFree™ Wax Alternative Papers additionally offers excellent water repellency and resistance to oils and condiments, is printable on both sides and its higher brightness and opacity helps to strength the visibility of the consumer's brand image and message.

Read more > [PaperAdvance](#) | [Ahlstrom-Munksjö](#)

● Product Development



photo: Stora Enso

Unilever's Carte d'Or ice cream in a new Stora Enso's paperboard

The Carte d'Or packages are produced using Stora Enso's Cupforma Natura™ paperboard. The board has a biodegradable barrier on its both sides to preserve ice cream safely in freezing and moist conditions. Not only the bowl but also its lid is made from the same, compostable paperboard from Stora Enso. The paperboard material allows the bowl to be 23% lighter than the former plastic packaging, helping Unilever to achieve its plastic reduction goals.

Read more > [Stora Enso](#)

● Product Development

NEW PAPER BASED PACKAGING



photo: Huhtamaki

Huhtamaki: new compostable double wall cup

Huhtamaki has added a new double-walled and compostable hot drinks cup to its Bioware range. The new Bioware Impresso Double Walled Hot Cup is made of paperboard with a plant-based PLA coating on the inside. Huhtamaki additionally says that the cup also features the company's Impresso bubble emboss, which provides insulation and a pleasant touch for users, while allowing drinks to stay warm.

Read more > [BioMarketsInsigth](#)

● Product Development

START-UP NEWS



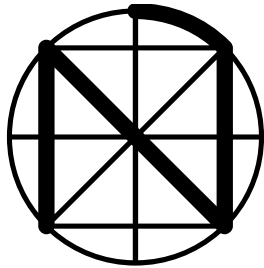
photo: Metsä

Woodio: Metsä Spring invests in waterproof wood composite technology

Metsä Group's innovation company Metsä Spring Ltd has made an equity investment of 4 million € in the Finnish Start-Up Woodio Ltd, a developer of waterproof wood composite products. Metsä plans to use Woodio proprietary technology for the valorization of Metsä Group's underutilized side-streams, such as the undersized wood chips generated in wood chipping at several Metsä Group mills, into long-lived, value-added products. Woodio already had success in the production and commercialization of bathroom and kitchen washbasins.

Read more > [Metsä](#)

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