

# RAIZ



Forest and Paper Research Institute

TECHNOLOGICAL  
SCOUTING NEWSLETTER

March 2021

## Highlights

- The biorefinery segment was highlighted during March 2021, with a wide range of solutions and projects presented: from wood-based foams and textile fibers to lignin production and nanocellulose for medical applications.
- Food packaging solutions are as well presented by Ahlstrom-Munksjö and Klabin.



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**Services Provided by RAIZ Technological Scouting:**

Technological Scouting Newsletter (monthly)

Technological Scouting On Demand (specific technological issues, upon request)

Industrial Property (IP) Survey (quarterly)

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## START-UP OF THE MONTH



The Swedish start-up, which has developed a patented technology for moulding cellulose into hard, durable packs, for replacing single-use plastics at a lower price, has announced a further step on its product development with the collaboration with two consulting companies, PA Consulting (UK) and Seismic Solutions (USA). PA Consulting is expected to develop PulPac's range of technical and commercial applications and to scale-up the manufacturing process. On the other hand, Seismic Solutions will introduce PulPac to its network of brand owners and manufacturers in North America, developing PulPac business in this region.

Read more ➤ [Packaging Insights](#)



## BIOREFINERY



Aalto University

### Smart Foams research project: new wood-based foam

Aalto University's new research project, named Smart Foams, plans to use artificial intelligence for developing wood-based foams able to replace Styrofoam and bubble wrap in packaging and other plastic products. The project will use biomimetics for replicating the natural phenomena. Using artificial intelligence, for example, a mixture of the compounds lignin, wood fibre, and Iaponite can be planned to have tailored features such as strength, flexibility and heat resistance. The total budget of the project is around a million euros.

Read more > [Aalto University](#)

● Technological  
● Product Development



Lignin Industries AB

### Lignin Industries AB: lignin-based material Renol® production started

The start-up Lignin Industries AB (former RenCom) has developed a proprietary process for transforming lignin into a renewable material for replacing plastic-based products, named Renol®. Possible applications are in films (shopping bags, mulch films or retail bags) or in injection moulding (furniture and automotive parts). After successful tests with a state-of-the-art twin screw extruder, the company announces the start of its Renol® production, with a predicted capacity of more than 1000 tonnes/year.

Read more > [Lignin Industries AB](#)

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## BIOREFINERY



Metsä

### Metsä: Kuura, a new textile fibre

In 2019 Metsä Group's innovation company, Metsä Spring, and the Japanese Itochu Corporation, have announced a test plan for demonstrating a new technology for converting paper-grade pulp into sustainable textile fibres, located next to Metsä Group's bioproduct mill in Äänekoski. The production process is described as an advanced direct dissolution method from undried pulp, and based on safer and more environmentally friendly chemicals.

Further developments are announced with the project now focusing on the fibre's market potential and its suitability for different applications. The first step of this new phase was the branding of the produced textile fibre as *Kuura* and its presentation to the general public during Japan Fashion Week.

Read more > [Metsä](#)

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Paper Advance

### UPM Biomedicals: development in 3D bioprinting

UPM Biomedicals has announce a collaboration with the bioconvergence company CELLINK for developing future regenerative medicine based on UPM's nanocellulose and CELLINK's 3D printing capabilities. 3D bioprinting is applied in cancer research, where tumors models can be printed to test their response to treatments, and in the printing of tissues or organs that can then be transplanted into patients.

Read more > [PaperAdvance](#)

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## PAPER ELECTRONICS



Iggesund

### Iggesund: paper based smart cards

Billions of smart cards are currently used as hotel keys, public transit passes, gift cards and others, the majority being fossil-based plastic cards. Iggesund has developed plastic free cards with contactless functionality based on paperboard. A state-of-the-art printing technique is used for the chip and the antenna for receiving and transmitting information. The antenna is said to be printed between two Iggesund's Invercote paperboard sheets (solid bleached boards). Conductive ink is used instead of aluminium making possible to recycle the card when it no longer works into, for example, paper pulp.

Read more > [Iggesund](#)

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## PACKAGING



Paper Advance

### Ahlstrom-Munksjö: new Quick Service Restaurant solutions

Ahlstrom-Munksjö presents its new Servera®Ultra Quick Service Restaurant (QSR) range of papers. In bleached or in natural options, the Servera®Ultra papers provide printability, flexibility for multiple converting processes, strength, grease and water resistance and heat retention. Ahlstrom-Munksjö says these last properties are achieved without the use of traditional polycoated treatments.

Read more > [Ahlstrom-Munksjö](#)

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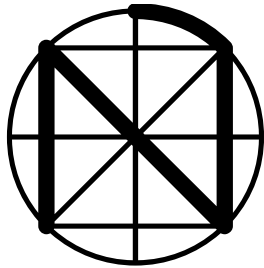
Klabin

### **Klabin: new paperboard for food packaging applications**

Klabin presents a new paperboard, the Klafold GB – Grease Barrier, featuring a water-based dispersion coating for adding grease barrier functions for food packaging applications. This coating eliminates the need for additional packaging or the application of additional coatings to the paperboard, and facilitating fiber recovery in recycling processes.

The paperboard is said to be produced at the Monte Alegre Unit in Paraná state leaving the manufacturing unit with the barrier coating already applied. The product is starting to be adopted across Brazil, and is already being used in packaging solutions in New Zealand, South Africa and Mexico.

Read more > [RISI](#) , [Klabin](#)



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