

RAIZ



Forest and Paper Research Institute

TECHNOLOGICAL
SCOUTING NEWSLETTER

December 2020

Highlights

Packaging initiatives was the major topic addressed by different companies during this month of December 2020, from new barrier coatings, bins for face masks and diapers packaging.

Lignin was, as well, mentioned in new supply agreements and applications in asphalt.

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Industrial Property (IP) Survey (quarterly)

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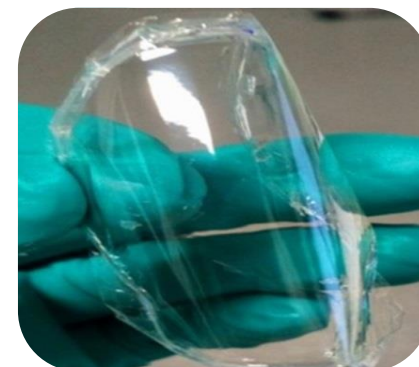
START-UP OF THE MONTH



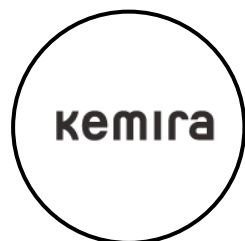
Cellugy, a Danish startup, has developed a new patent pending biopolymer, the EcoFLEXY, which is a high-performing nanocellulose derivative from sugar biowaste (e.g. fruit and vegetable waste), for application as a barrier coating in paper and board packaging.

The startup has now secured € 2.38 million funding from the European Innovation Council Accelerator to scale up the production of EcoFLEXY, focusing on technical optimization strategies, a pilot plant setup, and relevant pre-deployment activities.

Read more > [Cellugy](#) | [eu-startups](#)



BIOREFINERY

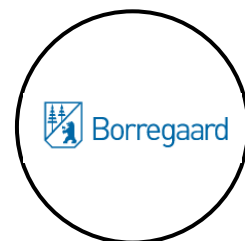


Kemira: biodegradable coating for paper and board industry

Kemira is partnering with Danimer Scientific for the development of biodegradable aqueous barrier coatings for more sustainable paper and board products. The companies will develop and apply Danimer Scientific's biopolymer, Nodax™ polyhydroxyalkanoate (PHA), which is renewably sourced from plants seeds, such as canola and soy, and is 100% biobased. First, the companies aim to manufacture coatings for limited commercial applications in 2021 before expanding to broader production options. Coffee cups seem to be a first selected application for the new barrier coatings.

Read more > [Kemira](#)

● Technological
● Product Development



Borregaard: new project for the development of biochemicals to replace petrochemical alternatives

The Lignin to BioAromatics project aims the development of processes for the production of bio-aromatics based on lignin from wood. These can be used in detergents, packaging, corrosion agents and antioxidants to composites, plastics, durable rubber and organic electrolytes, replacing the commonly used petrochemical aromatics.

The project has a duration of three and a half years, starting in 2021, and a total budget of NOK 39 million (around € 4 million). The Lignin to BioAromatics project additionally counts with the collaboration of the University of Lund (Sweden) and the University of Mainz (Germany).

Read more > [Borregaard](#)

● Technological



photo: PaperFirst

UPM: new Domtar lignin supply agreement

UPM and the Domtar Paper Company have signed an agreement allowing UPM to acquire the total annual kraft lignin production of Domtar's Plymouth Mill in North Carolina, starting as of January 2021. This will enable UPM to increase its supply of kraft lignin by more than 20.000 metric tonnes annually. It is additionally stated that part of the new supply will be used to complement UPM's BioPiva product range of kraft softwood lignin. UPM's BioPiva stands as a renewable alternative to fossil-based products, such as lignin-based phenolic resins.

Read more > [UPM](#)

● Technological



photo: PaperAdvance

RISE: to test lignin in asphalt

NCC Industry and RISE Research Institutes of Sweden are collaborating to test the use of lignin as a binding agent in asphalt. Lignin is extracted at RISE's demonstration facility, from black liquor from the company Nordic Paper. The filtrate is returned to Nordic Paper after processing. The project will last for more than six years, including full-scale trials using various types of mixing methods in various volumes in the asphalt. Already in 2021, the finished asphalt will be laid on five different stretches of road in Värmland (Sweden) to evaluate its durability and function. Wageningen University will as well collaborate in the project, along with the project LignoCity.

Read more > [PaperAdvance](#)

● Technological
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PACKAGING



photo: PaperAdvance

METSÄ: new corrugated waste bin for disposal of face masks

To avoid face masks ending up in littering public places or natural sites, Metsä Board partnered with the packaging design agency Futupack and with the corrugated board converter Capertum to manufacture a corrugated mask bin for the disposal of face masks. The mask bin was projected to be as aesthetic as possible to be placed easily into any indoor environment. Additionally, the mask bin is delivered flat, and can be quickly assembled. When full, it is easy to close the lid, and the entire bin can be safely and hygienically disposed of with the incinerated waste. MetsäBoard Pro WKL 160 g/m² coated white kraftliner was used as the top liner of the mask bin.

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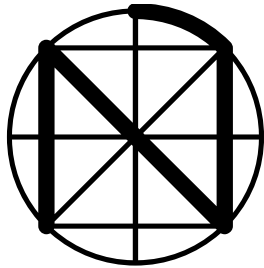
photo: Mondi

Mondi: new paper-based diaper packaging

Drylock Technologies now presents its Drylock Technologies' baby diapers in a paper-based packaging solution developed by Mondi, the EcoWicketBags packaging. This solution is recyclable and replaces the traditional plastic packaging for diapers. Mondi says that The EcoWicketBag can be placed in existing paper streams, even in countries with the strictest recycling regulations.

Read more > [Mondi](#)

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