

# RAIZ



Forest and Paper Research Institute

TECHNOLOGICAL  
SCOUTING NEWSLETTER

May 2020

## Highlights

Paper based packaging developments for cosmetics and food and beverages by Frugalpac, SIG and L'Oréal  
 A new interactive visitor experience for demonstrating sustainable forest management by Metsä



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- VTT: nanocellulose to capture microplastics in waterways
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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



RWDC Industries is a USA / Singapore headquartered biopolymer producer from a previous employee of the Company International Paper. RWDC Industries has developed a technology for producing the polymer polyhydroxylalkanoate (PHA) from a microbial fermentation of plant-based oils.

RWDC Industries has now raised about 118 million euros in a recent financing to build a new sustainable manufacturing facility in Georgia, USA.

Read more > [techcrunch](#) | [biomarketinsights](#) | [RWDC Industries](#)

## NEW CELLULOSE APPLICATIONS



photo: VTT

### VTT: nanocellulose to capture microplastics in waterways

VTT has developed a method which uses nanocellulose structures for an early identification of microplastics. These particles are usually only found accumulated in fish bodies. Using nanocellulose properties such as a mesh-like and porous structure and a large surface area, VTT developed method allows powerful capillary forces to be generated in the nanocellulose structure, allowing microplastics particles to be transported inside the mesh and to be bounded there. The next step could be the development of new and inexpensive filtration solutions using the method.

Read more > [VTT](#)

● Technological

## FOREST



photo: Metsä

### Metsä: Nemus Futurum

Metsä Group has developed a new interactive visitor experience for showcasing sustainable forest management and the Finnish forests in a completely new way and through the latest technology on site in the forest. At Nemus Futurum the visitors are guided through sustainable Finnish forest management, sustainable use of forests, forest nature and bioproducts with the help of a iPad and an customized app. The app uses GPS tracking and Augmented Reality to provide a controlled digital experience at the forest location of Nemus Futurum. The project has now been awarded an European Design Award.

Read more > [HIQ](#) | [Metsä](#)

● Forest

## BIOREFINERY

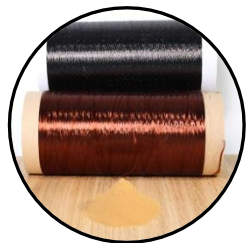


photo: Stora Enso

### Stora Enso: developing bio-based carbon fibers

Stora Enso has already been developing technology for the development of carbon fibers from wood-based raw materials, such as dissolving pulp and lignin. Now an agreement was announced with Cordenka, a producer of industrial viscose fibers, aiming to upscale the developed process to pilot scale. For now, expected applications are the ones requiring low weight and high mechanical performance, such as pultruded laminates used in manufacturing wind energy rotor blades.

Read more > [Stora Enso](#)

● Technological  
● Product Development

## PACKAGING



photo: foodbev

### Frugalpac: new food packaging product

UK-based packaging manufacturer Frugalpac has received a 2 million euros investment for the development of two new packaging products: a paper-based bottle for wine and spirits and a paper-based pot for various foods like noodles, yogurts and ice creams. Frugalpac's main product is its Frugal Cup paperboard coffee cup, made from 96% recycled paperboard and polyethylene food-grade liner.

Read more > [foodbev](#)

● Technological  
● Product Development

## PACKAGING



photo: NS packaging

### SIG: new on-the-go packaging solution

SIG is launching a packaging branded as *combismile* as a new alternative to on-the-go packaging for the food and beverage industry. The new packaging is made using renewable and recyclable cartons, standing as an alternative to plastic packaging. SIG additionally states that polymers from responsibly sourced plant-based materials are used in the packaging whenever needed. The *combismile* is expected to be used for a wide range of beverages such as: functional and still drinks, juices and nectars, ready-to-drink teas and coffees, milk drinks and value-added dairy products, water drinks as well as plant-based drinks.

Read more > [NS packaging](#)

● Technological  
● Product Development



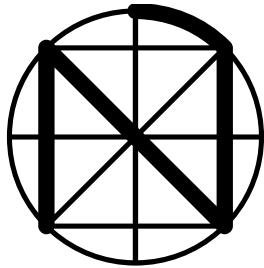
photo: packaginginsights

### L'Oréal: world's first cardboard cosmetic tube

L'Oréal brand La Roche-Posay has launched in the French market a sunscreen packaged in a cardboard tube which is said to reduce the use of plastic by about 45 %. The company says that it has adapted its manufacturing process to incorporate a new technology for replacing part of the plastic in the tube with cardboard. While still not entirely recyclable, as it still holds several plastic parts, the new tubes allow significant environmental gains.

Read more > [packaginginsights](#)

● Technological  
● Product Development



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