

Press release

nova-Institut GmbH (www.nova-institute.eu)
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Cellulose Fibre Innovation of the Year 2021: One of six nominated new technologies or applications will be awarded this title!

From cellulose-based foam for packaging over plastic-free menstrual pads to EMI shielding materials, the nominated six applications can help build a sustainable economy.

For the first time ever, the innovation award “Cellulose Fibre Innovation of the Year” will be granted to the innovative cellulose fibre industry for the development of new technologies and applications. The election and award ceremony will take place at the 2nd International Conference on Cellulose Fibres (CCF), 2–3 February 2021 (online event). More information about the award can be found on www.cellulose-fibres.eu/award-application.

Cellulose fibres are the fastest growing fibre group in textiles, the largest investment sector in the bio-based economy, and a solution for avoiding microplastics. Producers and inventors along the entire value chain from feedstock to the final product joined the competition.

Out of twelve creative and promising inventions six have been finally nominated for the “Cellulose Fibre Innovation Award”. The selection was made by a jury consisting of nova-institute employees and the advisory board of the conference. The audience will elect the three winners at the 2nd International Conference on Cellulose Fibres (www.cellulose-fibres.eu) which will be organized by nova-Institute on 2 February 2021.

Here are the six nominees!

Bast Fibre Tech (Canada): Compostable fibre products from agricultural hemp and flax waste

BFTi produces compostable fibre products out of agricultural waste from hemp and flax processing. Using biogenic waste from the production of fast-growing crops instead of using wood or fossil resources is environmentally and economically more sustainable. Applications for the obtained fibre with moisture absorbing properties are for example toilet paper and recyclable, thus flushable cleaning wipes.

More information: www.bastfibretech.com

Empa – Laboratories for Materials Science and Technology (Switzerland): Cellulose nanofiber assisted biomimetic aerogels for EMI shielding

Empa researchers combined cellulose-based aerogels with silver nanowires. The flexible composite blocks high-frequency electromagnetic radiation, which is traditionally achieved by using inflexible metal sheets or metallized foils. This ultra-light electromagnetic shielding

material can be used to protect electronic components or the transmission of signals from electromagnetic fields caused by neighbouring electronic devices or motors.

More information: www.empa.ch/web/s604/cellulose-emi-shielding

Kelheim Fibres (Germany): Plastic-free absorbent hygiene products

Kelheim Fibres developed plant-based fibre solutions for absorbent hygiene products. These comprise speciality fibres for the single layers of AHP with different functionalities: a hydrophobized fibre for the top sheet, a trilobal fibre for the acquisition/distribution layer and a hollow fibre for the absorbent core. These biodegradable and sustainably manufactured fibres enable the replacement of plastic fibres without a loss of performance. The material has the potential to be used also for the production of textiles, such as reusable menstrual underwear. First commercial end-products using Kelheim's fibre solutions are developed and intended to be launched in 2021.

More information: www.kelheim-fibres.com

Metsä Spring (Finland): Textile fibre based on paper-grade pulp

The Metsä Group is developing a more energy-efficient process based on a new solvent family to produce Man-Made Cellulosic Fibre (MMCF). Using ionic liquids, the MMCF can be produced from paper-grade pulp, avoiding the use of energy-intensive dissolving pulp. MMCF, such as viscose, lyocell or Modal®, are important fibres for the textile industry.

More information: www.metsaspring.com/project/textile-fibre-from-paper-grade-pulp/

OrganicDisposables (Poland): FibriTech – a porous and light material from cellulose for soilless farming

FibriTech is a new process for the production of porous and light material from cellulose and lignocellulose. A mixture of fibres can be used, including waste and recycled fibres. This extends the possible feedstock for usable materials and reduces waste. Desired properties are derived by the application of bio-additives. The resulting material can be used as a natural soilless substrate with favourable properties for both plants and soilless farming systems. Other possible applications are thermal and sound insulators and air filters.

More information: www.fibri.tech

Stora Enso (Sweden): Cellulose-based Foam by Stora Enso – a lightweight cellulose-based foam for packaging

“Cellulose-based Foam by Stora Enso” is a lightweight foam material made from cellulose. It is designed as an eco-friendly alternative for fossil-based packaging and cushioning materials such as expanded polystyrene or polyethylene. The foam has comparable shock-absorbing and insulating properties whilst being bio-based, biodegradable, compostable and recyclable in ordinary paper recycling.

More information: www.cellutech.se/cellulose-based-foam.html

2nd International Conference on Cellulose Fibre, 2–3 February 2020 (online event)

The “2nd International Conference on Cellulose Fibres” will cover the entire value chain from lignocellulosic feedstock, dissolving pulp, cellulose fibres – such as rayon, viscose, Modal®, lyocell or new developments – to a wide range of applications, woven textiles (clothing) and

non-wovens (wipes and technical applications). All these sectors have significantly gained momentum over the last few years.

The final programme is now available at: www.cellulose-fibres.eu/programme/
You can register to the online conference here: www.cellulose-fibres.eu/registration/

Kelheim Fibres (DE), Lenzing (AT) and Levaco Chemicals (DE) are supporting the conference as Gold Sponsors. Bronze Sponsor is NC Partnering (FI). Further information on our attractive sponsoring packages can be found at www.cellulose-fibres.eu/sponsoring/ – also the sponsoring of the Innovation Award is still possible.

nova-institute also wants to acknowledge the following associations and research institutions that actively participate as conference partners: BCNP Consultants (DE), C.A.R.M.E.N. (DE), CLIB – Cluster Industrial Biotechnology (DE), Fachagentur Nachwachsende Rohstoffe (FNR) (DE), Forest Stewardship Council (FSC) (DE), IBB – Industrielle Biotechnologie Bayern Netzwerk (DE), ITA – RWTH Aachen (DE), Russian Textile Association (RU), Textile Exchange (DE/US), The Fiber Year (CH) and World BioEconomy Forum (FI).

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nova-Institute is a private and independent research institute, founded in 1994; nova offers research and consultancy with a focus on the transition of the chemical and material industry to renewable carbon: How to substitute fossil carbon with biomass, direct CO₂ utilisation and recycling. We offer our unique understanding to support the transition of your business into a climate neutral future. nova-Institute has more than 40 employees.

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