

Press release

nova-Institut GmbH (www.nova-institute.eu)

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Bacteria-Based Cellulose Fibre Nullarbor™ (“No Trees“) Wins “Cellulose Fibre Innovation of the Year 2023” Award Against Strong Competition

The collaboration between Nanollose (AU) and Birla Cellulose (IN) with tree-free lyocell from bacterial cellulose called Nullarbor™ is the winning cellulose fibre innovation 2023, followed by Renewcell (SE) cellulose fibres made from 100 % textile waste, while Vybrana – the new generation banana fibre from Gencrest Bio Products (IN) won third place.

For the third time, nova-Institute awarded the “Cellulose Fibre Innovation of the Year” award in the frame of the “Cellulose Fibres Conference 2023”, Cologne, 8-9 March 2023. The yearly conference is the unique meeting point of the global cellulose fibres industry. 42 international speakers from twelve countries presented the latest market insights and trends, and demonstrated the innovation potential of cellulose fibres. Over 220 participants from 30 countries enjoyed the excellent networking opportunities. Leading international experts introduced new technologies for recycling of cellulose rich raw materials and practices for circular economy in textiles, packing and hygiene, which were discussed in seven panel discussion with active audience participation.

Prior to the conference, the conference advisory board had nominated six remarkable innovations. The winners were elected in an exciting head-to-head live-voting by the conference audience on the first day of the event. The innovation award “Cellulose Fibre Innovation of the Year 2023” was kindly sponsored by GIG Karasek (AT).

The three winners of the “Cellulose Fibre Innovation of the Year 2023” award

Winner: Nullarbor™ – Nanollose and Birla Cellulose (AU/IN)

In 2020, Nanollose and Birla Cellulose started a journey to develop and commercialize tree-free lyocell from bacterial cellulose, called Nullarbor™. The name derives from the Latin “nulla arbor” which means “no trees”. Initial lab research at both ends led to the joint patent application “production of high-tenacity lyocell fibres made from bacterial cellulose”.

Nullarbor is significantly stronger than lyocell made from wood-based pulp; even adding small amounts of bacterial cellulose to wood pulp increases the fibre toughness. In 2022, the first pilot batch of 260 kg was produced with 20 % bacterial pulp share. Several high-quality fabrics and garments were produced with this fibre. The collaboration between Nanollose and Birla

Cellulose now focuses on increasing the production scale and amount of bacterial pulp in the fibre.

www.nanollose.com

Second place: Circulose® – makes fashion circular – Renewcell (SE)

Ciculose® made by Renewcell is a branded dissolving pulp made from 100 % textile waste, like worn-out clothes and production scraps. It provides a unique material for fashion that is 100 % recycled, recyclable, biodegradable, and of virgin-equivalent quality. It is used by fibre producers to make staple fibre or filaments like viscose, lyocell, modal, acetate or other types of man-made cellulosic fibres. In 2022, Renewcell, opened the world's first textile-to-textile chemical recycling plant in Sundsvall, Sweden – Renewcell 1. The plant is expected to reach an annual capacity of 120,000 tonnes.

www.renewcell.com

Third place: Vybrana – The new generation banana fibre – Gencrest Bio Products (IN)

Vybrana is a Gencrest's Sustainable Cellulosic Fibre upcycled from agrowaste. Raw fibres are extracted from the banana stem at the end of the plant lifecycle. The biomass waste is then treated by the Gencrest patented Fiberzyme technology. Here, cocktail enzyme formulations remove the high lignin content and other impurities and help fibre fibrillation. The company's proprietary cottonisation process provides fine, spinnable cellulose staple fibres suitable for blending with other staple fibres and can be spun on any conventional spinning systems giving yarns sustainable apparel. Vybrana is produced without the use of heavy chemicals and minimized water consumption and in a waste-free process where balance biomass is converted to bio stimulants Agrosatva and bio-based fertilizers and organic manure.

www.gencrest.com

Sponsoring

The innovation award “Cellulose Fibre Innovation of the Year 2023” was sponsored by GIG Karasek (AT).The nova-Institute would like to thank Kemira (FI), Lenzing (AT) and List Technology AG (CH) for supporting the conference as Gold Sponsors, as well as Dienes Apparatebau GmbH (DE) and Kelheim Fibres (DE) who support the event as Bronze Sponsors.

Would you like to increase your public visibility? You are welcome to join us as a sponsor of the Cellulose Fibres Conference 2024. To see all sponsoring options please visit www.cellulose-fibres.eu/sponsoring/.

Partners

The Cellulose Fibres Conference 2023 was supported by numerous industry and trade associations, non-profit organisations, research institutions and interest groups, that are thematically linked to the conference: BCNP Consultants (DE), C.A.R.M.E.N. e.V. (DE), CLIB – Cluster Industrial Biotechnology (DE), IBB – Industrielle Biotechnologie Bayern Netzwerk (DE), ITA - Institut für Textiltechnik of RWTH Aachen University (DE), kunststoffland NRW

(DE), Renewable Carbon Initiative (International), The Fiber Year Consulting (CH) and WCBEF - World Bioeconomy Forum (International). For further information please visit <https://cellulose-fibres.eu/partners/>.

Further Information

The next conference will be held on 13 and 14 March 2024. For more information please visit www.cellulose-fibres.eu.

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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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