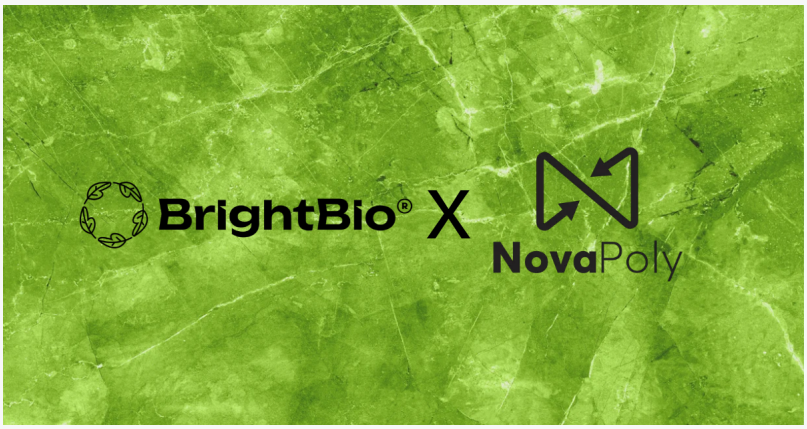
From three layers to two: a new bio-based approach to performance textiles

Brightplus and Leaf Bio combine bio-based textile technologies to create a simpler two-layer performance fabric without a separate adhesive layer.



BrightBio and NovaPolyPEF come together in a 100% bio-based, glue-free waterproof fabric.

OULU, FINLAND, October 2, 2026 /EINPresswire.com/ -- Performance textiles have traditionally forced brands to navigate trade-offs between technical performance, complex material constructions and the transition to more sustainable materials. A new material development brings together complementary bio-based technologies to explore another way forward. By eliminating the need for a separate adhesive layer, the concept opens up new possibilities for simpler, more sustainable performance textile constructions.

> Sustainability should not compromise performance. Combining complementary material technologies can help move textiles beyond fossil-based materials without sacrificing functionality.”
>
> *Milja Hannu-Kuure*

The concept combines NovaPolyPEF, a 100% bio-based PEF (polyethylene furanoate) textile platform, with BrightBio®, the bio-based functional lamination technology developed by Finnish green-tech company Brightplus. The new material concept will be presented at Performance Days in Munich on 13–14 October 2026.

At the heart of the development is simpler material construction. The BrightBio film is laminated directly onto the NovaPolyPEF textile, providing both the functional layer and bond without the need for a separate adhesive layer. This simplifies the construction from a conventional three-layer structure to two functional layers.

Two bio-based technologies. One performance fabric.

The development brings renewable material innovation to both the textile substrate and its functional layer, while keeping the demanding functional and aesthetic requirements of performance textiles at the centre.

Rather than replacing only one component of a conventional textile construction, the concept brings together complementary technologies across different layers of the material. This approach offers new possibilities for textile manufacturers and brands seeking to simplify material constructions while increasing the use of renewable materials in high-performance applications.

Performance without compromise

BrightBio® is a next-generation bio-based coating technology developed to provide an alternative to conventional fossil-based functional textile coatings while maintaining the performance required for demanding applications.

BrightBio uses certified renewable raw materials, including non-edible biomass side streams and captured CO□. The technology is designed as a drop-in solution compatible with existing textile production processes, enabling manufacturers to adopt the technology without major changes to their production lines.

“Sustainability should not mean compromising on performance. The textile industry needs materials that can move away from fossil-based materials and harmful substances while still delivering the durability, functionality and design freedom expected from high-performance products. This project demonstrates how complementary material technologies can help make that transition possible,” says Milja Hannu-Kuure, CEO of Brightplus.

The new material concept will make its debut at Performance Days in Munich on 13–14 October 2026 and will be showcased in the Innovation Corner.
BrightBio (Brightplus), Booth IN21I NovaPolyPEF, Booth IN22. Learn more:
www.brightplus.com/performance-days-2026

About Brightplus and BrightBio®
Brightplus is a Finnish green-tech company reshaping the future of materials with bio-based innovations. Its mission is to rid the world of toxic coatings.
BrightBio® is a next-generation bio-based coating engineered for functional textiles. It is designed to deliver high performance with sustainability and circularity, without compromising aesthetics, process compatibility or safety. BrightBio uses certified renewable raw materials, including non-edible biomass side streams, and is designed for integration into existing textile production processes.

About Leaf Bio
Leaf Bio develops plant-based advanced materials, including FDCA and PEF, focused on helping

reduce reliance on fossil-derived aromatic materials across textiles, packaging, and consumer applications. Leaf Bio is the official partner of NovaPoly.

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