PARTNERSHIP

DITF Deutsche Institute für Textil+Faserforschung

ALPhANOV Optics & Lasers Technology Center

BAT GRAPHICS VERNITECH

BeCS future solutions

Det Nationale Forskningscenter for Arbejdsmiljø

FREY ZEIN

idener.ai

imec embracing a better life

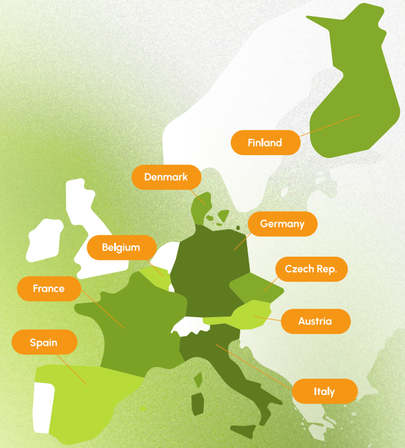
KNOPF & SOHN characters for textiles

NEXT TECHNOLOGY TECNOTESSILE Società Nazionale di Ricerca S.r.l.

NILTEXTILE

Steinbeis Europa Zentrum

VTT



CONTACT

Project Coordinator

Thomas Fischer
German Institutes of Textile and Fiber Research Denkendorf (DITF)
thomas.fischer@ditf.de
biofibreloop.eu

Funded by the European Union

Funded by the European Union Horizon Europe Research and Innovation Program under Grant Agreement No. 101130603.

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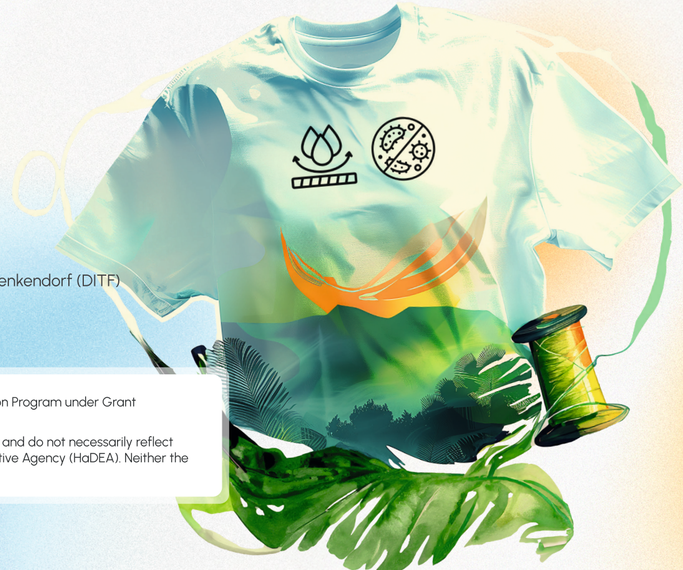


biofibreloop
Pioneering Sustainable Clothing

Circular bio-based technical textiles with innovative bio-inspired non-toxic functionalisation

ABOUT BIOFIBRELOOP

The BioFibreLoop project will make the EU textile industry more sustainable with a focus on work-, active- and outdoorwear. Recyclable textiles with bio-inspired functionalisation will be produced from bio-based materials.

HORIZON Innovation Action (IA)

Duration: 06/2024 – 11/2027

6.5 million EUR EU funding budget for all partners

13 partners

9 countries

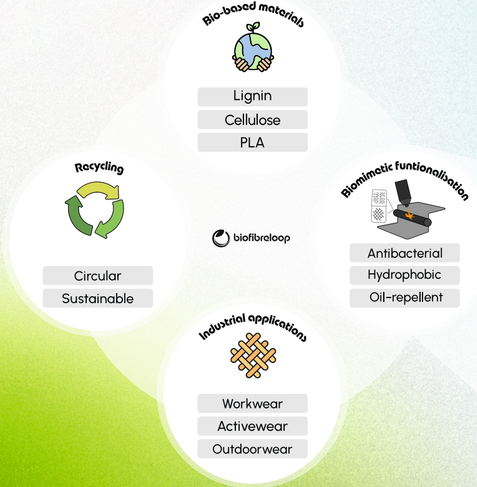
Objective 1	Biomimetic functionalisation of three bio-based materials validated and scaled-up
Objective 2	Digital tools developed and integrated
Objective 3	Recyclability & biodegradation assessments of the bio-based textiles successfully validated
Objective 4	Safety & sustainability assessment for human exposure, environmental, social and economic impact
Objective 5	Process demonstrated in operational environment at TRL 7
Objective 6	Path to market entry by 2027

CONCEPT

Expected benefits

- nearly waste-free circular economy
- 100% reduction of hazardous chemicals
- intelligent functional properties desired by customers

→ **sustainable and safe production of textiles**



BIOMIMETIC FUNCTIONALISATION

Using a laser, bio-inspired micro- and nanostructures will be created on the surface of heatable embossing rollers made of titanium and stainless steel. These biomimetic surfaces will be replicated on the textiles during textile embossing. Implemented structures bestow the textiles with desired functional properties: antibacterial activity, hydrophobicity and oil repellence.