

Thomas Koehler  Feb 23, 2021 2 min read

BioBase - Extended project info revealed

Development of bio-based alternatives from already available resources for textile applications with competitive costs and properties

Duration

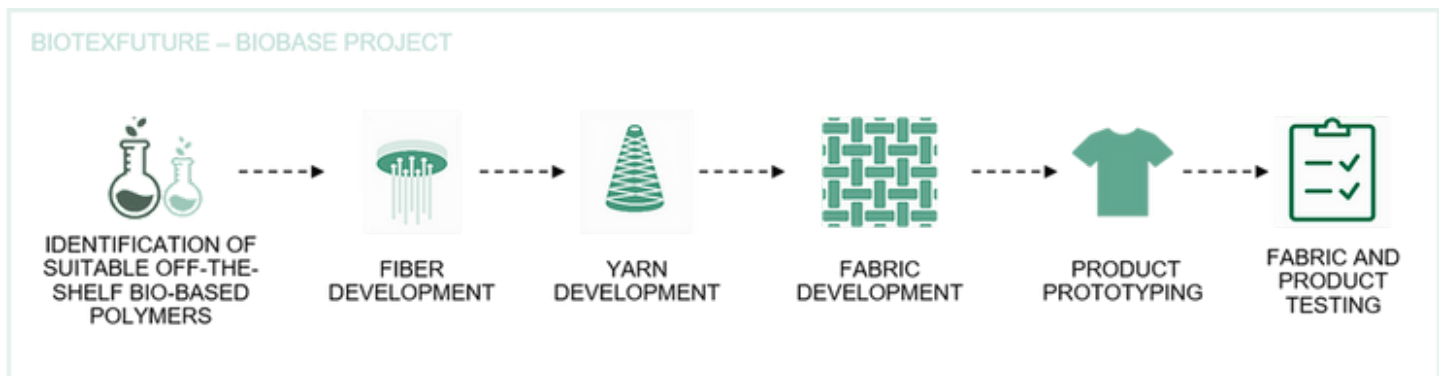
01.12.2020 – 30.11.2023

Motivation

Fibres and textiles are used in the four key textile industries of technical textiles, sports textiles, automotive and interiors. In 2019, global fibre production amounted to more than 120 million tonnes. Of these, 73 % belong to man-made fibres, which are produced on the basis of natural or synthetic polymers (plastics) . A central problem in the production of man-made fibres based on synthetic polymers is the dependence on fossil raw materials, which are subject to various ecological and, in the long term, due to their finiteness, also economic and political risks. Polymers based on renewable raw materials can be an alternative.

Aim

The aim of the BioBase project is to establish bio-based polymers in the textile industry and to demonstrate their full potential. In order to achieve this goal, the four key sectors of the textile industry in Germany were selected: automotive, sportswear, interiors and technical textiles. In each sector, a petroleum-based product is replaced by a product made of biopolymers that has equivalent properties.



Approach

In the BioBase project, the entire textile value chain of the respective products is run through. In each process step, the technological maturity level for the industrial production of bio-based and sustainable man-made fibres is increased step by step. The aim is to achieve a technological leap from Technology Readiness Level (TRL) 4 to TRL 6 - 7. The polymers, yarns and textile surfaces are being developed in an application-oriented manner and with regard to technical requirements in the industries. In cooperation between the research institutions and industrial partners, industrially produced demonstrators are being created that will have a lighthouse effect for the German bioeconomy and demonstrate the potential of the biobased polymers available on the market. Within the project, further research and development potential for the BIOTEXFUTURE innovation space will be identified. These can be implemented in further sub-projects of the innovation space.

Partner

adidas AG

Aachen-Maastricht Institute for Biobased Materials e.V.

Carl Weiske GmbH & Co. KG.

HUESKER Synthetic GmbH

Institut für Textiltechnik der RWTH Aachen University

STRÄHLE+HESS GmbH

TECNARO GmbH

TFI – Institut für Bodensysteme an der RWTH Aachen e.V

Zschimmer & Schwarz GmbH & Co KG

ZUE Zwirneri Untereggingen GmbH

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