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4.2 million euros for research into textile recycling

Around the world, used textiles are still rarely recycled and pile up into huge mountains of waste. A recent study by the Boston Consulting Group (BCG) drew attention to this problem. However, the low recycling rate is also due to the fact that only a small percentage of used textiles are actually suitable for recycling into high-quality materials and for demanding applications. The German Institutes of Textile and Fiber Research Denkendorf (DITF) are addressing this problem with their research. Europe's largest textile research center has launched two research projects with a total project volume of over 4.2 million euros.

To promote the recycling of high-performance fibers such as carbon and glass fibers, the DITF will establish a center for the development of high-performance fiber composite structures based on recycled high-performance fibers (HiPerReF) over the next two years. There, scientists are developing a complete process chain for the industrial-scale production of highly oriented semi-finished products from recycled carbon and glass fibers. In order to achieve maximum performance in the component, the interaction of all machines and equipment is being optimized to produce commercially available semi-finished products such as prepreg and non-porous composite plastics with a fiber volume fraction of over 45 percent.

The CYCLOTEXUM project focuses on recycling classic textile waste into high-quality yarns. The aim is to intelligently combine existing mechanical, physical, and chemical process steps so that fine, uniform yarns can be produced from secondary raw materials. Material Flow and Cost Accounting (MFCA) makes it possible to review all technological developments for economic efficiency and sustainability.

PRESS RELEASE



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The research work of the two centers provides the national and global textile industry with effective tools and solutions for an effective textile circular economy.

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Tapes for high-performance applications made from recycled carbon fibers: Photo: DITF.