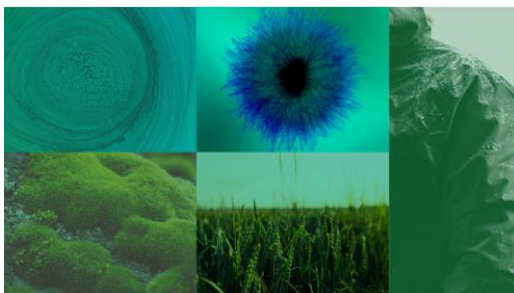




BIOTEXFUTURE

Review 2024

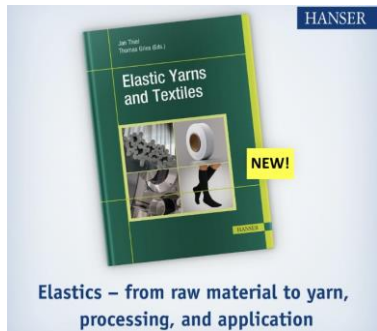
The BIOTEXFUTURE network now counts an impressive number of 116 members from industry and research. The innovation space continues to grow in popularity, which can be largely attributed to concrete networking activities such as the BIOTEXFUTURE Spring Forum 2024, which was successfully held for the first time as a webinar with over 180 participants, and the BIOTEXFUTURE Fall Forum 2024, organized in conjunction with the ISPO Munich, the world's largest sporting goods trade fair.



In the beginning of 2024, seven new projects were launched in the BIOTEXFUTURE innovation space. The projects **BioCushion**, **FunColor**, **BioVlies**, **BioPEtex**, **CircWool GXY**, **Co-Spinning**, and **SmartBioFinish** have introduced new topics such as spacer fabrics or colours, or continue existing research questions, such as the study of bio-based textile finishes based on anchor peptides or environmentally friendly geotextiles in the agricultural nonwovens sector.

For example, the **BioPEtex** project focuses on research into bio-polyethylene (Bio-PE) fibers, which, unlike bio-based polyester, are made from a pure monomaterial and have so far been used primarily in packaging rather than for textile production. The goal of the project is to produce a demonstration piece:

a spinneret-dyed T-shirt with elastic finishing made from bio-based raw materials, suitable for thermo-mechanically recycling. Another new interesting project, **CircWool**, aims to develop a solvent-based, recycling technology for wool waste as precondition for the development of a new high-performance sustainable fiber. Through this new technology, the ITA-researchers in cooperation with the Outdoor company ORTOVOX intend as well to be able to avoid the practice of incineration of sheeps' wool after sheering and to reduce wool-waste in the future.



In addition to these developments, several projects have been completed in 2024. One of these is **CO2Tex**. The later focused on research into elastic yarns, with the goal of developing melt-spun elastic yarns from thermoplastic polyurethanes. In the context of this project, Dr. Jan Thiel, Deputy Project Lead, published the book "**Elastic Yarns and Textiles**", a compilation of the current state of research on stretch-fibers from raw material to fiber and yarn processing and application. Additionally, environmental aspects (e.g. recycling) are also addressed. We will further explore this exciting topic and planning to present a webinar on the subject as part of our BIOTEXFUTURE Spring Forum 2025 end of March 2025.

In 2024, we further had the opportunity to participate in several trade fairs, allowing us to further enhance our communication activities and present various project results publicly. The first event we attended was **Munich Fabric Start** in January 2024. We were happy to be part of this well-known trade fair once again, participating in the 'Sustainability Hub' with our BIOTEXFUTURE projects: CO2Tex, BioBase, and TransitionLab. Furthermore, we took part in two other trade fairs: HANNOVER MESSE from 22 to 26 April and TechTextil in Frankfurt from 23 to 26 April.

HANNOVER MESSE brought together key sectors of industry, including drive technology, automation, energy, research and development, industrial IT, and supply chain solutions. Recognized as one of the most important events shaping the future of industry, it provided an excellent platform for innovation. At this event, we exhibited at the, 'Showcase Bioeconomy,' organized with the Federal Ministry of Education and Research (BMBF), presenting the results of three BIOTEXFUTURE projects: BioTurf, CO2Tex and BioBase.



At the same time, we also took part in **TechTextil** trade fair in Frankfurt, renowned for showcasing the full spectrum of technical textiles, nonwovens, functional apparel textiles, and textile technologies. BIOTEXFUTURE participated as an exhibitor, presenting key developments in selected projects at the joint stand with the Institute of Textile Technology (ITA).

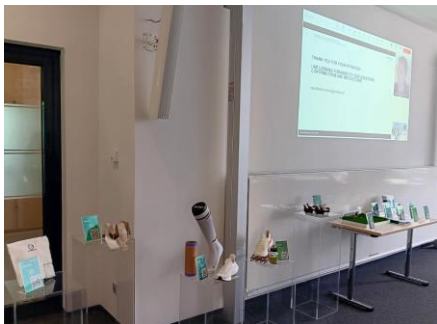


These trade fairs proved to be excellent opportunities for fostering industry relationships and facilitating in-depth dialogues and further generated significant attention, particularly due to awards for projects such as LIGHT LINING and SA Dynamics.



On 14 June 2025, kick-off of the European Football Championship, we hosted a press conference on the BioTurf project and presented: **‘Bio-based artificial turf from Aachen - the future material for environmentally friendly sports pitches’**. This event garnered considerable interest, as we displayed a new generation of artificial turf made from bio-fibres, entirely without infill material - a ground-breaking innovation for sustainable sports fields and an outstanding example for sustainable research at RWTH Aachen University.

During summer, we conducted multiple video shots across Aachen, Berlin, Greiz, and Herzogenaurach, resulting in a high-quality short movie that provides a detailed overview of our individual projects and the BIOTEXFUTURE innovation space. Click [here](#) to enjoy the movie.



On 18 June 2025, we organized a **BIOTEXFUTURE Member Day** in Aachen focussing on **‘The Future of the Textile Bio-economy’**.

September was filled with many events: At **Munich Fabric Start** we showcased the TransitionLab Project under the heading **‘Connect. Interact. Improve’** and attended afterwards, the **Global Fiber Congress** in Dornbirn.

Later from 18 to 21 September 2025, we exhibited at the **Material Matters** trade fair in London with the Fiber Futures exhibition, showcasing BIOTEXFUTURE’s cross-industry research and material innovations in high-performance textiles. The exhibition featured ten approaches to alternative resource flows, innovative spinning techniques and bio-manufacturing. A large international audience had the chance to see some of our new demonstrators.



We wrapped up September with the **BIOTEXFUTURE Forum 2024** (webinar) dedicated to **‘Textile research on bio-based materials’**, with nearly 200 participants engaging in insightful discussions. The presentation included final results of our BioBase project and the current state of research into new bio-

based fibres as well as an outlook on environmentally friendly textile innovations, expected to be launched on the market in the near future.

In October, the ITA Institute represented us at the **Performance Days** in Munich. Following this, we participated in the Long Night of Science at RWTH Aachen University, a great event that allowed us to connect with students and local citizens, bringing our projects to a broader audience.

We further participated at the **International Textile Conference Aachen-Dresden-Denkendorf 2024** in Stuttgart (21-22 November), where we engaged with industry leaders, experts, and young professionals on the future of textiles and bioeconomy.

We concluded 2024 with a major event on 2 December 2025, the **BIOTEXFUTURE Fall Forum 2024**, held in Munich alongside the ISPO trade fair. This event, dedicated to sustainable sports products and bio-based materials, was a great success. The forum provided valuable insights into ongoing and completed scientific projects,



while at the exhibition



at **ISPO Munich** from 3-5 December 2025 we displayed our demonstrators in collaboration with Studio Nima. ISPO Munich, the world's largest sporting goods trade fair, proved to be an excellent platform for showcasing the latest developments.

Overall, 2024 was an eventful and productive year for BIOTEXFUTURE, marked by strong progress, successful presentations, and new industry connections.

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