German Institutes of Textile and Fiber Research

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German Institutes of Textile and Fiber Research

- Europe’s largest textile research center
- Founded in 1921, foundation under public law
- 3 research centers, 1 production company (ITVP)
- Application oriented research from molecule to product on 25,000 m²
- Research with industrial pilot facilities, focus on technical textiles and life sciences
- Connected to University of Stuttgart and Reutlingen University by 3 chairs and 2 professorships
German Institutes of Textile and Fiber Research

Key figures 2017

- Employees: approx. 300
- Turnover: approx. 27 Mio. € (12 Mio. € public, 15 Mio. € industry)
- Industry: 31% Baden-Württemberg
  (without ITVP)
  51% national
  18% international
  49% small and medium-sized enterprises

Application oriented research from molecule to product
German Institutes of Textile and Fiber Research

Research fields

- High Performance Fibers and Yarns
- Functionalized Textiles and Finishing
- Lightweight Design and Fiber Composites
- Smart Textiles
- Medical Technologies
- Textile 4.0

Application fields (2016)

- Architecture and Construction 8%
- Health and Care 10%
- Mobility 15%
- Energy and Environment 19%
- Production Technologies 38%
- Clothing and Home Textiles 10%

High Performance Fibers and Yarns

Functionalized Textiles and Finishing

Lightweight Design and Fiber Composites

Smart Textiles

Medical Technologies

Textile 4.0
High Performance Fibers and Yarns

Today
Ceramic fibers for high temperature applications

Future
Processing of recycled high-performance fibers

Vision
Cost-effective carbon fibers from renewable raw materials
Functionalized Textiles and Finishing

Today
Coatings out of ionic liquids enable new material combinations

Future
Energy-independent building with flexible solar thermal textile collectors

Vision
Bioglizz – biological alternative to artificial snow
Lightweight Design and Fiber Composites

Today
Non-destructive testing of lightweight structures and textile constructions

Future
Complex 3D outline woven figures for composites

Vision
Intelligent lightweight design with functional integration
Smart Textiles

Today
Electroluminescent printed structures

Future
Sensor shirt for monitoring vital parameters for the protection of firefighters

Vision
Energy and weight savings with textile power actors for automation process
Medical Technologies

Today
Medical implants

Future
Intervertebral disc closures

Vision
Nerve regeneration
**Textile 4.0**

**Today**

Individualized products manufactured by big data optimized processes

**Future**

Networked process monitoring of fiber composite components with integrated sensors

**Vision**

Dynamic, adaptive self-organized and learning textile processes, materials and clothes
The Future is Textile