DEUTSCHE INSTITUTE FÜR
TEXTIL+FASERFORSCHUNG

RESEARCH FROM MOLECULE TO PRODUCT

EUROPE'S LARGEST TEXTILE RESEARCH CENTER

TEXTILE INNOVATIONS FOR PRACTICE

The German Institutes of Textile and Fiber Research Denkendorf (DITF) represent Europe's largest textile research center.

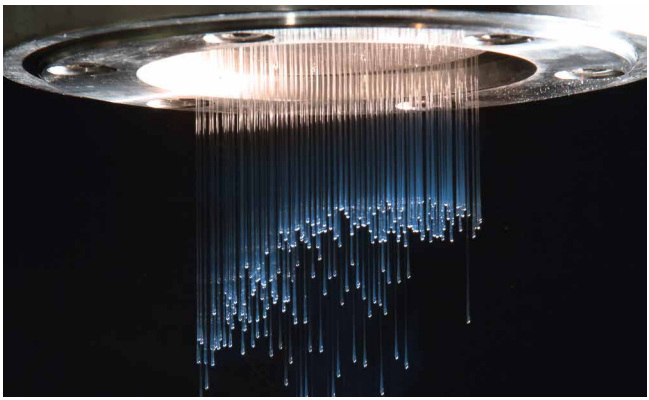
With their research areas, the DITF are the only textile research institution worldwide that span the entire textiles production and value-added chain:

> from molecule to product
> from idea to market-friendly solution
> as a reliable commercial partner

Facts and Figures:

> founded in 1921
> approx. 250 employees
> 25,000 m^2 research and production area

The DITF conduct interdisciplinary research and development projects involving chemistry, material sciences, process technology, material technology, mechanical engineering and plant design and management.



FIELDS OF APPLICATION

Architecture and construction

Raw materials and construction materials with textile components, fiber-based materials

Health and care

Textile implants and regenerative medicine, wound treatment products, diagnostic and monitoring systems, smart textiles, drug delivery and therapeutic systems

Mobility

Fiber reinforced structures and products e.g. for the automotive industry, aerospace technology, architecture

Energy and environment

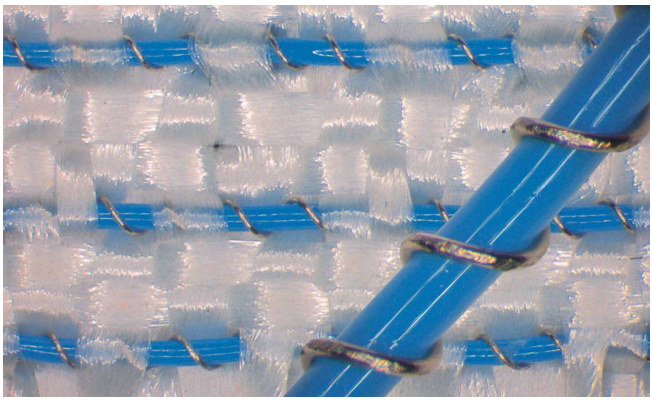
Energy and environmental technology e.g. water treatment, aquatic and landscape conservation, recycling of high-performance fibers, smart energy management

Production technologies

Process engineering and process technology for higher productivity, quality and energy saving

Clothing and home textiles

Functional clothing, climate-controlled textiles, illuminated textiles, acoustic textiles, smart textiles



COMPETENCES

Polymer Synthesis

Polymers for fibers and matrices, precursors for carbon fibers, ceramic fibers, cellulose and biopolymers

Fibers and Yarns

Wet spinning technologies, dry spinning technologies, melt spinning technologies, bicomponent spinning technology, texturizing and drawing, nonwoven technologies, staple fiber technologies, winding technologies

Fabrics and Structures

Spacer technologies, weaving, braiding, knitting, joining technologies, tissue engineering, membranes, braiding pultrusion, structure winding

Functionalization

Sol-Gel Technology, dyeing and finishing, printing technologies, nanotechnologies, physical and chemical methods, coating, minimal application technologies, integration of electronic components, development of sensory and actuatory properties

Industry 4.0

Modeling, virtualization, value-added systems, business models, digital engineering, intelligent and sustainable production, e-learning, blended learning

SERVICE

Textile testing services

> Chemical and physico-chemical tests on degradable
> Non-degradable polymers and medical products manufactured from them
> Biological tests: Cell culture and tissue culture technology of animal and human cells, tissue engineering, microbiology and hygiene
> Testing of textiles with regard to skin tolerance for textiles worn close to the skin
> Determination of material properties of fibers, yarns and textile fabrics and composites
> Determination of biodegradation in soils and water
> Simulation of material aging
> Computer tomography for materials development, materials testing and quality assurance

The labs have been accredited for numerous test methods according to DIN EN ISO/IEC 17025:2018 (DAkkS).

Prototype building in the mechanical workshop

Experienced qualified personnel build tangible models with modern technology and efficient software from research ideas.

Pilot plant for the manufacture of prototypes and small-scale production

A professional machine park combined with well-equipped technical installations guarantee ideal conditions for custom-made orders. Scientists at the DITF implement and evaluate theoretical concepts in the pilot plant.

ITV Denkendorf Produktservice GmbH (ITVP)

The focus lies on the manufacturing of medical precursors for industrial partners in cleanrooms. Development of new products for medical textiles and technical textiles within the scope of contract research.

NETWORK AND PARTNERS

An important factor of success for the DITF is the application of a close cooperative structure of regional, national, and international networks.
Due to three chairs and two professorships, the DITF are closely connected to the University of Stuttgart and Reutlingen University.
In addition, many cooperations with nationally and internationally renowned institutions of higher education and industrial and non-university related R&D institutions.

innBW Innovationsallianz Baden-Württemberg
AFBW Allianz Faserbasierte Werkstoffe Baden-Württemberg e.V.
Universität Stuttgart
textil+mode
AiF Mitglied
techtera
SWISS TEXTILES
Textranet European Network of Textile Research Organizations
Mitglied der ZUSE-GEMEINSCHAFT
Europäische Union Europäischer Fonds für regionale Entwicklung
EFRE Investition in Ihre Zukunft.
Baden-Württemberg

The German Institutes of Textile and Fiber Research (DITF) Denkendorf are a foundation under public law supervised by the Ministry of Economic Affairs, Labour and Tourism Baden-Württemberg.

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