FILK Freiberg Institute

Research – Development – Services

Putting Knowledge to Work

The approach of combining basic scientific knowledge with applied industrial research was already pursued by our founding fathers in 1889, and today we continue to attach great importance to close exchange with the industry. Ultimately, our ideas and projects must pay off sustainably for the success of our industrial partners by translating them into applications and products.
Our motivation is to see ideas grow and to implement them into the industry. At the same time, we contribute to enabling the economy and society to manage enormous transformation processes of tomorrow.
To this end, we develop ideas with our employees and encourage their creativity and curiosity. The horizontal transfer of knowledge between chemists, engineers, physicists, biologists and mathematicians is important to us. This is the only way we can learn and try things we have not tried before - from basic experiments to finished applications for our industrial customers.
To be able to make this contribution, our institute is also involved in national, European and international research networks and committees. Interdisciplinary exchange is an important basis for us and our partners in science. In this way, we also play an active role in shaping the research community.
Welcome to the FILK Freiberg Institute!

Professor Michael Meyer
Scientific Director / Managing Director
Professor Haiko Schulz
Institute Director / Managing Director

HISTORY MEETS INNOVATION

FILK Freiberg Institute

As a scientific institution, our range of services includes innovative materials research, technology and process development, pilot testing of processes and products, material testing in the accredited test laboratory, development of test methods, expertise and consulting on materials and technologies.
We also are intensively involved in training and further education to secure the skilled labour of tomorrow.
Independent and application-oriented, we react quickly and flexible to the research needs of the industry. In combinig scientific knowledge with our high level technological competence we support the industry with relevant solutions.
With this transfer, we support companies from industry, science and business, especially small and medium-sized enterprises, to develop their innovative strength. In this way, we contribute our share to the sustainable successful development of our economy and our society.

130 Years of Experience

since 2021 — **FILK Freiberg Institute non-profit Ltd.**

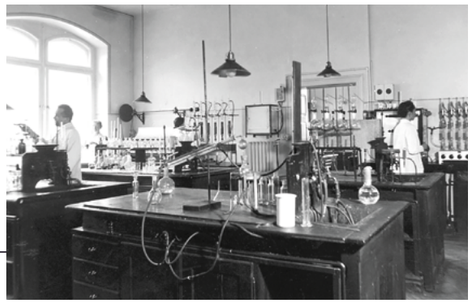
2003 — **Renaming to Research Institute for Leather and Plastic Sheeting (FILK) non-profit Ltd.**

1992 — **Privatisation as Research Institute for Leather and Coated Textiles Technology non-profit Ltd. by founding a supporting association**

1974 — **Change of name to Research Institute for Leather and Coated Textiles Technology**

1948 — **Change of name to German Leather Institute Freiberg (DLI)**

1938 — **Association to the German Research Institute and Technical College for the Leather Industry**



1897 — **Foundation of the German Research Institute for the Leather Industry**

1889 — **Foundation of the German Tanning School**

We are familiar with these materials

Functional Layers / Composites

A composite material fulfils functions that its basic materials alone cannot. Often these are barrier effects, flame protection, migration barriers, improved soiling behaviour and cleaning ability, waterproofness and breathability or a pleasant feel, to name but a few. Smart textiles are also well established, offering additional functions such as heating, cooling, measuring or responding to environmental stimuli such as light, moisture or ambient temperature.

Leather / Leather Fibre Material

Leather is a renewable raw material. The natural appearance in conjunction with its property profile makes leather an attractive material for the automotive, furniture, clothing, fashion and shoe industries. FILK is one of the oldest centres for leather research and leather technology worldwide. The material is still an area of expertise of our institute, which our customers can fall back on.

Plastics / Elastomers / Films

An outstanding feature of plastics is that their technical properties such as mouldability, hardness, elasticity, tensile strength, temperature and heat resistance or chemical resistance can be adjusted in a wide range by manufacturing processes and additives. In this field, our institute comprises experience and knowledge for your material development.

Coated Textiles

Research into coated textiles and leather substitutes came to our institute in the 1960s, when the development of leather-like materials was forced. In this respect, we look back on more than 60 years of experience, which also help you to develop new material properties, new raw material bases or to develop resource-saving technologies.

Trend Substitutes

For some years now, materials, that are supposed to substitute classic leather and synthetics, are no longer indispensable. The background to this is a growing need of consumers for products that do not use fossil or animal raw materials. There are very different approaches with regard to the basic materials and the technologies. Because we are very familiar with leather and synthetics, we can also help with these new materials.

Textiles

Textiles and textile raw materials are the basis for the production of composites and have a significant influence on the properties that are to be produced. The selection of suitable textile substrates for the production of coated textiles requires in-depth material knowledge, which we have in abundance. No matter which raw material base – we bring textile and coating together.

Collagen / Biogenic Raw Materials

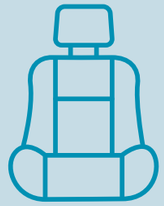
The founding fathers of our institute were already working with collagen as a raw material, in order to optimise leather production and to develop new leather qualities. Even then, a high level of material competence was necessary to understand tanning processes. From this derives the high scientific level and technological competence in collagen research at the institute. In recent years, however, other animal and plant proteins are also researched.

Biomaterials

Biomaterials serve as temporary or permanent replacements for organs, organ parts or body structures. We are researching the biocompatibility of synthetic materials and the biopolymer collagen. Such hybrid materials promise better human compatibility. The elaboration of cell colonisation concepts and the proof of bioactivity are also research topics at our institute.

For these industries, we are active

Furniture / Object Furnishing



Automobile / Mobility

Shoes / Clothing / Accessories

Technical Textiles / Protective Equipment

Medical Devices

Chemical Industry

Toys / Articles of Daily Use

Our focus for society and economy

Mobility

Energy Transition

Bio Economy

Health

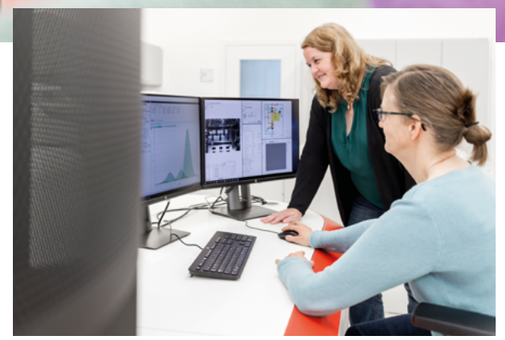
Resources

Environment & Climate

Sustainability

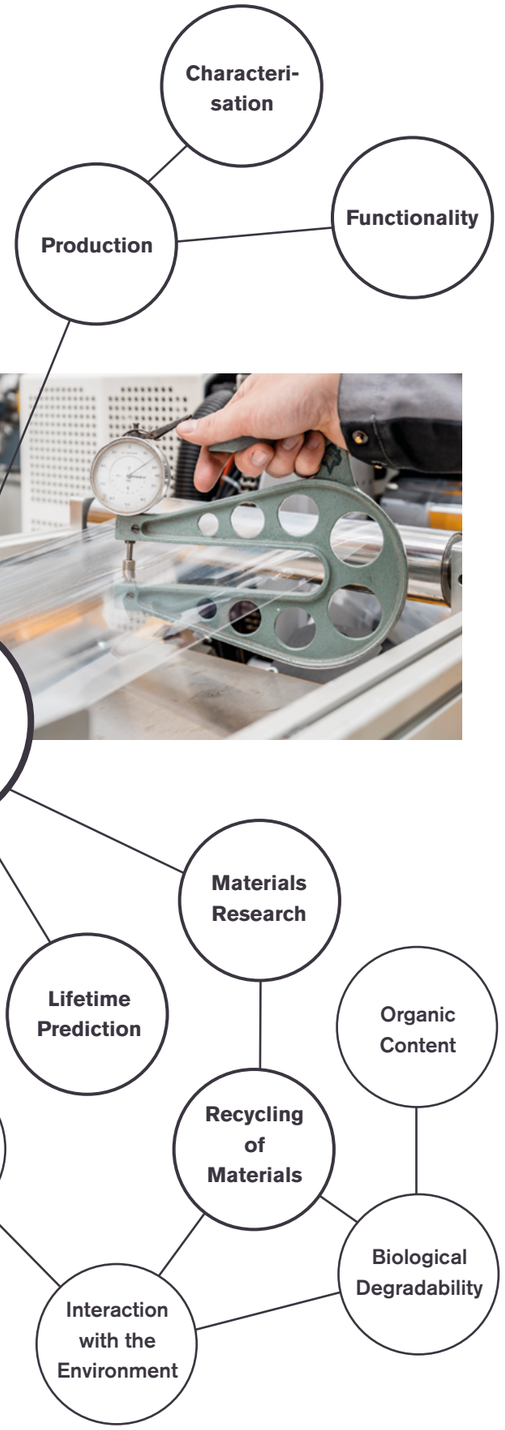
Home & Living

FROM LABORATORY TO THE INDUSTRY



EVERYTHING STARTS SMALL

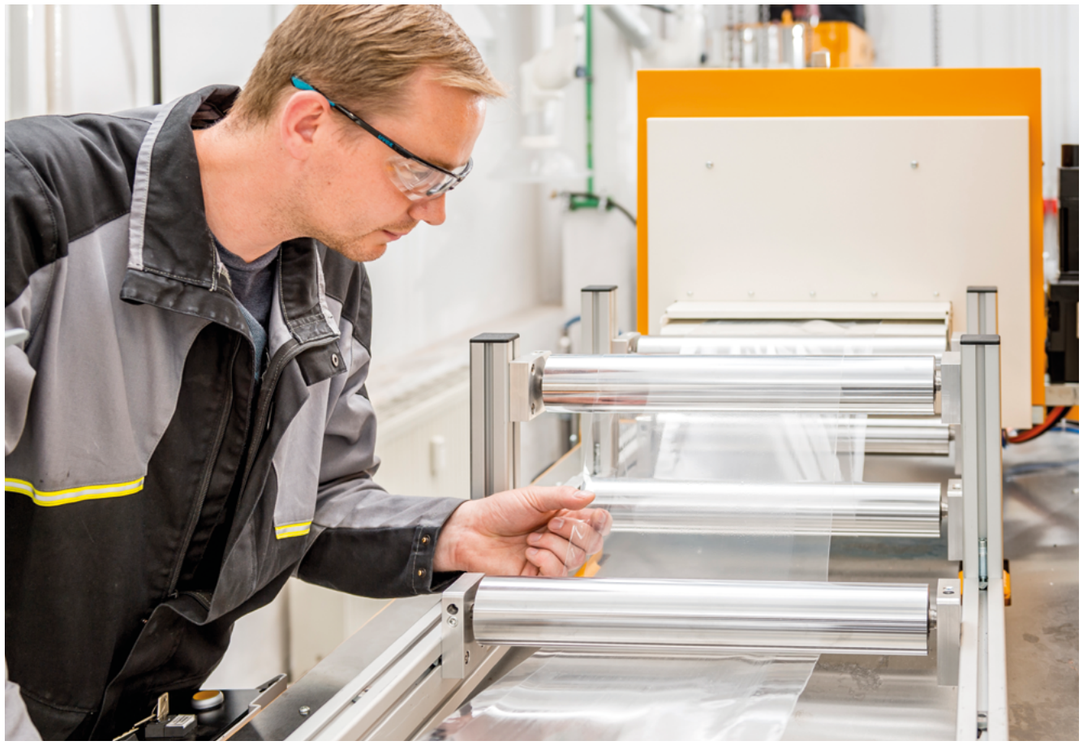
Before we can prove the industrial suitability of our project, ideas are evaluated by our interdisciplinary teams in preliminary studies and tests. Raw materials are characterised, prepared and manufacturing technologies are simulated on a laboratory scale. To this end, our research laboratories are equipped with a comprehensive analysis and technology infrastructure, which we constantly adapt to new requirements and needs.



WE BRING IT ON THE ROLL

In our scientific fields, we dispose of pilot plants on a semi-technical scale. These can be used to conduct trials for the industrial roll out of technologies and material developments. Our customers and partners from industry and science also use these facilities.

From Laboratory to the Industry



Strong networks - Wide reach

For an innovation-friendly ecosystem, a close exchange between business, science and society is an important foundation. This requires strong networks in which ideas are generated, knowledge is transferred and contacts are made.
Through the membership in the German Federation of Industrial Research Associations (AiF) alone, our institute is in the company of more than 100 other industry-supported research associations, which in turn include more than 50,000 companies of all branches and industries in Germany under one roof. They are all part of the Industrial Collective Research (IGF).
In addition, there are more than 80 institutes of the Zuse-Gemeinschaft e.V., which organises and represents our industrial research institutions at the federal level. Its Saxon counterpart, the Sächsische Industrieforschungsgemeinschaft (SIG) e.V., counts 19 members who cooperate very closely at state level.
Participation in specialist networks ranges from Nano-Carbon, eco-friendly packaging, lightweight construction, biotechnology to the Zuse Bioeconomy Cluster or the AiF Research Alliance for Medical Technologies. We actively contribute our expertise here, but also find complementary expertise there. Furthermore, various transfer networks are actively used for transferring research into practice. Our scientists are also involved in well over 40 scientific and industry associations.

Become a part!

To examine means to evaluate - Evaluation means understanding

In the accredited testing laboratory (DIN EN ISO / IEC 17025) we offer you a comprehensive portfolio of physical-mechanical test methods for material characterisation, chemical and thermo-chemical analysis methods for pollutants as well as test methods for the determination of emission properties.
In addition to the standard tests, we also carry out numerous special test methods for damage and defect analysis. No matter if leather, collagen materials, leather fibre materials, coated textiles (e.g. synthetic leather), textiles, foils or plastics is concerned; no matter whether as a single material or as a polymeric layered composite or component – for the examination of your materials you can rely on competent and timely processing.

As a certified material testing service provider, we are ready for both national and international clients in the automotive, furniture, object furnishing, protective clothing and medical industry. Benefit from our individual advice. Our high level of interdisciplinary experience and expertise means that you will always receive a well-founded answer to your specific question.

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