

## Contact

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Photo: Fraunhofer IGP

## Overview of services

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# Fiber Composite Technology



*Photo: Holger Martens*

## Fiber Composite Technology

### Holistic optimization of large structures for a sustainable future

#### Work area

The Fiber Composite Technology department of the Fraunhofer IGP deals with the holistic optimization of large fiber composite structures such as rotor blades of wind turbines, ship superstructures or applications in the building industry.

The focus of work ranges from the development and optimization of fiber composite construction methods and manufacturing processes to the qualification of new fiber composites and core materials as well as the development of sustainable recycling solutions.

### Our services at a glance

- Development of lightweight concepts and construction methods
- Design and dimensioning of composite components
- Numerical simulation (FEM) of lightweight structures
- Development of composite manufacturing processes
- Optimization of composites for joining processes
- Fire-resistant composite materials
- Material tests of fiber composites, plastics and sandwich laminates (quasi-static, cyclic, under temperature, aging)
- Instrumented component and part testing
- Development of new test methods for special applications
- Physical testing (density, fiber volume content) and polymer analysis (DSC, DMA, rheology)

Fiber composites, connections and components are tested and qualified under standardized conditions in the accredited test laboratory of the Fraunhofer IGP. New test methods are also developed and used for special applications.