

AZL Workgroup

AZL is the  
OFFICIAL CENTER of



for Composite-based  
LIGHTWEIGHT  
PRODUCTION

# Hybrid Thermoplastic Composites



Expert &  
Business  
Community



We link the demands and requirements of OEMs and part manufacturers with the novel solutions of machine, material and technology developers



Just one example of the enormous potential of this workgroup is the success story of the **Ultra-Fast Consolidator Machine**.

The machine for the production of tailor-made laser-assisted in-situ consolidated TP-FRP laminates within cycle times of less than 5 seconds was built up from scratch by AZL in close cooperation with industrial partners.

More info on the project:



# Connecting Science, Engineering and Production

The workgroup is engaged in the consolidation of the high-potential technology of overmolding **thermoplastic FRP inlays for series production** with partners from industry and RWTH Aachen University since 2013. It has regularly initiated collaborations and publicly funded partner projects.

## Roadmap & Topics

Our main activities are **improving materials through continuous fiber reinforcement** and conducting **studies on fiber composites** based on regular interviews with experts. The main technological challenges are:

- Effort in material and part testing
- Industrialized tape placement systems
- Alternatives to carbon fiber - hybridization with metal
- Scalability - robustness and quality assurance
- Functionality - more than mechanics
- Thermal management in manufacturing

Design

Process &  
Part  
Simulation

Inlay  
Production

Over-  
molding

Finishing &  
QA

Material



Impulses for  
Research



Identification of  
Pre-Competitive Topics



Initialization of  
Projects



Meeting every  
6 Months





Find more information about our AZL Workgroups

In cooperation with



## What our Workgroup is all about

The primary goal of the AZL Workgroups is to network active partners from research and industry, from production and application development in the field of hybrid thermoplastic composites.

The activities go far beyond pure networking. The definition of real goals and initiatives and the regular exchange lead again and again to new processes, products and collaboration and make the AZL Workgroups so unique.

## Business Platform "Thermoplastic Composites"

AZL Business Platforms were built in addition to the r&d activities of AZL Workgroups and provide you with details on lightweight technologies: Get focused information on highlight lightweight technologies, find a broad range of service and products along the entire value chain, explore use cases to learn on present realized applications and technology solutions, contact your business partners for your individual lightweight solution.

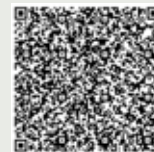
Visit us at [www.tp-composites.com](http://www.tp-composites.com)

## Join the Network of more than 80 active Partners:



## About AZL

AZL stands for excellence in lightweight production. As a one stop shop for market and technology know how, the senior staff of AZL brings together experts and decision makers from academia and industry to support business and technology development for the lightweight industry. We support you, regardless of your position in the value chain, in the development, benchmarking and improvement of your design methodologies, manufacturing techniques and products.



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