Technical University of Applied Sciences Wildau

Department of Engineering and Natural Sciences

About this organisation

Machine translation

This organisation has been machine-translated based on data provided in German.

The Technical University of Applied Sciences Wildau is the largest university of applied sciences in Brandenburg and offers sustainable traditional, but also interdisciplinary modern degree programmes in engineering and natural sciences with a high level of application orientation. Since 2001, it has been one of the strongest research universities in Germany: over 40 research groups are working on current topics in applied and basic research.

Several working groups at the TH Wildau are conducting research in the field of lightweight construction: The "High-Performance Polymeric Materials" group develops products and processes in the field of engineering plastics, composites and recycling. The development of new materials is aimed in particular at utilising recyclable and renewable raw materials for high-quality applications. Physico-chemical, material-technical and thermal methods are used for the development of material systems in co-operation projects with regional, national and European SMEs. The "Microsystems Technology" research group has broad expertise in the areas of construction and design (CAD), development (CAM), simulation (CFD), surface coating, materials and assembly in plastics technology. Prototypes are produced with the aid of rapid prototyping, such as 3D printers or (micro) milling machines. In addition, mould elements for injection moulding or punching tools can be produced.

Hochschulring 1
15745 Wildau
Brandenburg
Germany
www.th-wildau.de/hochschule/fachbereiche/fachbereich-ingenieur-und-naturwissenschaften/

Organisation type
University or higher education institution

Sectors
No specific sector

Employees
50 up to 249

Turnover
n/a

Funding
n/a

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About this organisation

Main areas covered	Product and process development, Plastics recycling, solvolysis, Material and system development, Fibre-reinforced plastic systems, Application-specific synthetic resins
Infrastructure	Laboratories for plastics technology, Materials engineering & materials analysis, Model and tool making, Preparation and process technology, Design on thermoplastics and thermosets
Certifications	Family-friendly university
Keywords	Rapid prototyping, Additive manufacturing, Prototyping
Memberships	Core team lightweight construction Brandenburg, KuVBB e.V., Fraunhofer University of Applied Sciences co-operation, Plastics and Chemistry Cluster BB

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts, Materials, Tools and moulds	✓	✓	
Services & consulting Training, Testing and trials, Engineering, Prototyping, Validation, Simulation, Technology transfer	✓	✓	

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight material construction	✓		
Functional integration Actuator technology, Media conductivity, Sensor technology, Material functionalisation	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), Materials analysis, Destructive analysis, Non-destructive analysis, Others (Structural dynamic analyses)	✓	✓	✓
Modelling and simulation Loads & stress, Structural mechanics, Materials	✓	✓	
Plant construction & automation Automation technology		✓	
Recycling technologies Recycling, Upcycling	✓		

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Selective laser sintering (SLS), Stereolithography	✓	✓	
Coating (surface engineering) Galvanising, Painting, Plasma process, Powder coating, Sputtering	✓	✓	
Fibre composite technology Manual lamination, Resin infusion process	✓		
Forming Forging, Deep-drawing	✓	✓	
Joining Adhesive bonding, Soldering, Riveting, Screwing, Welding	✓	✓	
Material property alteration Mechanical treatment, Thermochemical treatment, Thermomechanical treatment, Heat treatment	✓	✓	
Primary forming Extrusion, Casting, Injection moulding	✓	✓	
Processing and separating Drilling, Turning, Milling, Sawing, Shearing/ punching, Grinding, Cutting	✓	✓	
Textile technology			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics	✓	✓	
Cellular materials (foam materials)			
Composites Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Natural fibre reinforced plastics (NFRP)	✓	✓	
Fibres			
Functional materials			
Metals Aluminium, Steel	✓	✓	
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	✓
Structural ceramics			
(Technical) textiles			

Contacts

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Contacts

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Transfer scout lightweight construction

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