

About this organisation

Machine translation

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

The Leibniz-Institut für Verbundwerkstoffe GmbH (IVW) is a non-profit research organisation of the state of Rhineland-Palatinate and the Technical University of Kaiserslautern. We develop composites with thermoplastic and thermosetting plastics as well as with functionally optimised fibre and particle reinforcements.

Component design, material compounding and material analysis, production technology

Erwin-Schrödinger-Straße 58
67663 Kaiserslautern
Rhineland-Palatinate
Germany
www.ivw.uni-kl.de



Organisation type

Non-university research institution

Sectors



Employees

50 up to 249

Turnover

€2m - €10m

Funding

n/a

Leibniz Institute for Composite Materials GmbH

About this organisation

Main areas covered Analytics, construction methods, biomaterials, Crash, fatigue, joining, Impregnation, preforming, pressing, Simulation, Smart Structures, Tape, Thermoplastic, thermosets, tribology

Infrastructure Equipment for coupon and component testing, Organosheet production/SMC plant, Presses, CAE, tribo test benches, Welding system, tape layer, Material analysis, winding machines

Certifications

Keywords Composite materials, Lightweight construction, Fibre-reinforced plastic composites, Function integration, CFRP

Memberships

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts, Machines and plants, Software & databases, Systems and end products, Materials, Tools and moulds	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Engineering, Prototyping, Validation, Simulation, Technology transfer, Others (Materials analysis, test method development)	✓	✓	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	
Functional integration Actuator technology, Sensor technology, Thermal activation, Material functionalisation, Others (Multifunctional materials)	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), Materials analysis, Destructive analysis, Non-destructive analysis, Others (Development of tribological testing methodology and technology)	✓	✓	
Modelling and simulation Crash behaviour, Loads & stress, Life-cycle analysis, Optimisation, Processes, Structural mechanics, Materials	✓	✓	
Plant construction & automation Handling technology	✓	✓	
Recycling technologies Recycling, Upcycling	✓	✓	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Laminated object manufacturing (LOM)	✓	✓	
<i>Coating (surface engineering)</i>			
Fibre composite technology Filament winding, Manual lamination, Resin infusion process, Resin transfer moulding, Pre-preg processing, Vacuum infusion, Others (Forming technology, Pressing processes (SMC, GMT...))	✓	✓	
Forming Impact extrusion, Compression moulding, Thermal converting, Deep-drawing	✓	✓	
Joining Adhesive bonding, Sewing, Welding	✓	✓	
Material property alteration Heat treatment	✓	✓	
Primary forming Extrusion, Pultrusion, Injection moulding	✓	✓	
<i>Processing and separating</i>			
Textile technology Preforming	✓	✓	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics, Biocomposites, Wood, Others (FDA-compliant materials)	✓	✓	
Cellular materials (foam materials) Closed-pore	✓		
Composites Aramid fibre composites, Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Metal-fibre-polymer composite, Nanocomposites, Natural fibre reinforced plastics (NFRP), Others (Fillers and additives, polymer and ceramic particles)	✓	✓	
Fibres Aramid fibres, Basalt fibres, Glass fibres, Carbon fibres, Metal fibres, Natural fibres	✓	✓	
Functional materials Shape memory materials, Piezoelectric materials, Others (Multifunctional compounds, nanocomposites, coatings, self-organising particles)	✓	✓	
Metals Aluminium, Steel, Others (Copper)	✓	✓	
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	
<i>Structural ceramics</i>			
(Technical) textiles Yarns, rovings, Laid webs, Crocheted fabrics, Woven fabrics, Knitted fabrics, Nonwovens, mats, Others (Binder tape laying (DFP))	✓	✓	

Contacts

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