About this organisation

Machine translation

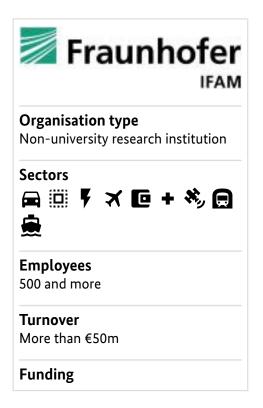
This organisation has been machine-translated based on data provided in German.

The Fraunhofer IFAM is one of the most important independent research institutes in the fields of adhesive bonding technology, surfaces, moulding and functional materials. At the 7 locations in Bremen, Dresden, Stade, Wolfsburg and Braunschweig, Helgoland and Cuxhaven, scientific excellence with application orientation and measurable customer benefits as well as the highest quality are among the central guidelines of the institute.

Around 700 employees from 20 departments currently pool their broad technological and scientific expertise in seven core competences: Metallic materials, polymer materials, surface technology, bonding, moulding and component production, automation and robotics as well as energy storage and converters. In detail, the spectrum of our contract research ranges from materials, shaping and joining technology to the functionalisation of surfaces, the development of complex components and systems and current issues relating to digital transformation. Fraunhofer IFAM covers the entire value chain from material development to product design and integration into industrial production - including pilot production, quality assurance procedures and targeted measures for staff training in new technologies. The entire technology spectrum is applied to lightweight construction solutions.

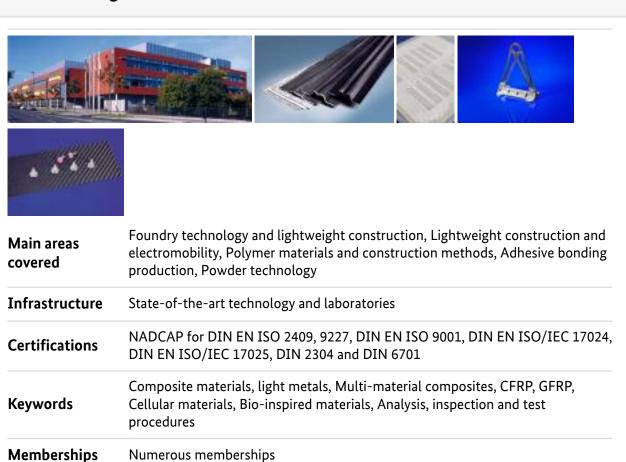
staff training in new techno spectrum is applied to light Wienerstr. 12 28359 Bremen Bremen Germany

www.ifam.fraunhofer.de



leichtbauatlas.de Page 1 of 7

About this organisation



Numerous memberships

leichtbauatlas.de Page 2 of 7

Overview of lightweighting expertise **Machine translation** This organisation has been machine-translated based on data provided in German. Manufacturing Research **Development** & Supply Offer **Products Services & consulting** Training, Consulting, Testing and trials, Prototyping, Validation, Simulation, Technology transfer, Others (Bonding technology, DVS-EWF bonding practitioner, DVS-EWF bonding specialist, DVS-EWF bonding engineer, fibre composite training, fibre composite plastic, fibre composite plastic specialist, fibre composite repair)

leichtbauatlas.de Page 3 of 7

Overview of lightweighting expertise				
Machine translation				
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	Research	N Development	Manufacturin & Supply	
Field of technology				
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	✓	
Functional integration Actuator technology, Sensor technology, Material functionalisation	✓	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), System analysis, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓		
Modelling and simulation Crash behaviour, Loads & stress, Life-cycle analysis, Optimisation, Processes, Structural mechanics, Materials, Reliability validation	✓	✓		
Plant construction & automation Automation technology, Others (Lightweight manufacturing, lightweight mould construction, hybrid structures, lightweight concept construction)	✓	✓	~	
Recycling technologies				

leichtbauatlas.de Page 4 of 7

Overview of lightweighting expertise				
Machine translation				
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	Research	Pevelopment	Manufacturin & Supply	
Manufacturing process				
Additive manufacturing 3D printing, Electron beam melting, Laminated object manufacturing (LOM), Selective laser melting (SLM, LPBF,), Selective laser sintering (SLS), Stereolithography, Others (Binder Jetting, Functional Printig)	✓	✓	✓	
Coating (surface engineering) Painting, Plasma process, Others (Plasma technology and dry-chemical processes, wetchemical pre-treatment, corrosion protection, printing processes, adhesion promotion, release coatings, insulation coatings, sensorisation, paint application technology and process engineering, tribology)	✓	✓	✓	
Fibre composite technology Manual lamination, Resin infusion process, Resin transfer moulding	✓	~		
Forming				
Joining Hybrid joining, Adhesive bonding, Riveting	✓	✓	✓	
Material property alteration				
Primary forming Extrusion, Casting, Sintering, Injection moulding	✓	~	✓	
Processing and separating Cutting, Others (Laser cutting of electrical sheets)	✓	✓		
Textile technology				

leichtbauatlas.de Page 5 of 7

Overview of lightweighting expertise				
Machine translation				
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	Research	Manufacturin Development & Supply		
Material				
Biogenic materials Biocomposites, Others (Bonding of biogenic materials)	✓	✓		
Cellular materials (foam materials) Closed-pore, Open-pore, Syntactic foams	✓	✓		
Composites Glass-fiber reinforced plastics (GFRP), Carbon- fiber reinforced plastics (CFRP), Metal matrix composite, Nanocomposites, Laminates	✓	✓		
Fibres Basalt fibres, Glass fibres, Ceramic fibres, Carbon fibres, Metal fibres	✓	✓		
Functional materials Electrorheological/magnetorheological fluids, Electrostrictive / magnetostrictive materials, Piezoelectric materials	✓	✓		
Metals Aluminium, Intermetallic alloys, Magnesium, Steel, Titanium	✓	✓		
Plastics Thermoset plastics, Thermoplastics	✓	✓		
Structural ceramics				
(Technical) textiles				

leichtbauatlas.de Page 6 of 7

Contacts Machine translation This organisation has been machine-translated based on data provided in German. Mr Prof. Dr. rer. nat. Bernd Mayer Institute Director bernd.mayer@ifam.fraunhofer.de

leichtbauatlas.de Page 7 of 7