

Freiberg University of Mining and Technology

Institute for Processing Machines and Recycling Systems Technology

About this organisation

Machine translation

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

At the IART, we are researching more efficient machines and processes for processing raw materials. We develop ideas and solutions for improved or completely new machine concepts on the basis of in-depth analyses of material properties down to the microscopic level. Energy efficiency and the sustainable use of resources are not at odds with cost-effectiveness and performance.

The IART's Recycling working group deals with processes that serve to return lightweight materials, in particular fibre-reinforced plastics, to the material cycle. The focus here is on mechanical preparation processes for the manufacture of defined recycling products or sub-processes for the manufacture of semi-finished products within more complex preparation processes.

Lampadiusstraße 4
09599 Freiberg
Saxony
Germany
tu-freiberg.de/fakult4/iart



Organisation type
University or higher education institution

Sectors


Employees
10 up to 49

Turnover
n/a

Funding



About this organisation

Main areas covered	Machines, recycling, sorting, Comminution, compound digestion
Infrastructure	Technical centre
Certifications	
Keywords	Hybrid lightweight structures, CFRP
Memberships	Platform FOREL

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
<i>Products</i>			
Services & consulting Training, Consulting, Testing and trials, Validation, Simulation	✓	✓	✓
Field of technology			
Design & layout Hybrid structures	✓		
<i>Functional integration</i>			
<i>Measuring and testing technology</i>			
<i>Modelling and simulation</i>			
<i>Plant construction & automation</i>			
Recycling technologies Downcycling, Material separation, Recycling, Upcycling	✓	✓	✓

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing		✓	
<i>Coating (surface engineering)</i>			
<i>Fibre composite technology</i>			
<i>Forming</i>			
<i>Joining</i>			
<i>Material property alteration</i>			
<i>Primary forming</i>			
<i>Processing and separating</i>			
<i>Textile technology</i>			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
Composites Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Metal-fibre-polymer composite, Laminates, Textile-reinforced concrete	✓	✓	
<i>Fibres</i>			
<i>Functional materials</i>			
<i>Metals</i>			
<i>Plastics</i>			
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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Contacts

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