Neue Materialien Bayreuth GmbH

non-university research institution

About this organisation

Neue Materialien Bayreuth GmbH is an independent, non-university research institution. Our task is to develop innovative materials and efficient production processes for plastics, metals and material combinations. In doing so, we perceive the requirements of sustainability, digitalisation, and energy.

EXPERTISE Process development / materials optimization / material selection / life cycle assessment (LCA) / recycling and sustainable substitution / materials analysis and component testing MATERIAL Bead foams / fiber-reinforced polymers / thermoplastic elastomers / high temperature metals / polymer-metal hybrids / hard metals / recycled materials

Gottlieb-Keim-Straße 60
95448 Bayreuth
Bavaria
Germany
www.nmbgmbh.de

Organisation type
Non-university research institution

Sectors

Employees
50 up to 249

Turnover
€2m - €10m

Funding

Main areas covered	Process Chain for Fibre Composites, Foam Injection Moulding, Bead Foam Processing, Additive Manufacuring with polymers and metals, Hot Forming of Steels, Life Cycle Assessment
Infrastructure	2.500 t Inject Mould. mach., tape laying, HT press, 2K Turning Plate Machine, Demo center Add. Manuf. polymers and metals, Bead Foam Machines, Forming press (convent/IHU), Multiaxial Tape-laying Machine
Certifications	
Keywords	Particle Foams, Thermoplast. Composites, Special injection moulding process, High-Strength Steels, Life Cycle Assessment, Integral Foams
Memberships	CU Composites United

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Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts, Materials, Tools and moulds, Others	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Prototyping, Validation, Simulation, Technology transfer, Others (Life Cycle Assessment)	✓	✓	
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	
Functional integration Sensor technology, Thermal activation, Material functionalisation	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), Environmental simulation, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	
Modelling and simulation Loads & stress, Life-cycle analysis, Optimisation, Processes, Structural mechanics, Materials	✓	✓	
Plant construction & automation Plant construction, Automation technology, Handling technology	✓	✓	
Recycling technologies Recycling, Upcycling	✓	✓	

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Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Deposition welding, Electron beam melting, Fused deposition modeling, Selective laser melting (SLM, LPBF, ...), Selective laser sintering (SLS)	✓	✓	
Coating (surface engineering) Plasma process, Others (Thermisches Spritzen (Lichtbogen und Niederdruckkaltgas))	✓	✓	
Fibre composite technology Resin infusion process, Resin transfer moulding, Pre-preg processing, Vacuum infusion	✓	✓	
Forming Impact extrusion, Compression moulding, Thermal converting, Deep-drawing, Fluid active media based forming	✓	✓	
Joining Adhesive bonding	✓	✓	
Material property alteration Heat treatment	✓	✓	
Primary forming Extrusion, Injection moulding	✓	✓	✓
Processing and separating			
Textile technology Preforming	✓	✓	

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Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics, Biocomposites	✓	✓	
Cellular materials (foam materials) Closed-pore, Open-pore, Syntactic foams	✓	✓	
Composites Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Nanocomposites, Natural fibre reinforced plastics (NFRP), Particulate composites	✓	✓	
Fibres Glass fibres, Carbon fibres, Natural fibres	✓	✓	
Functional materials			
Metals Intermetallic alloys, Steel, Titanium	✓	✓	
Plastics Thermoset plastics, Elastomers, Thermoplastics, Others (Composites)	✓	✓	
Structural ceramics			
(Technical) textiles Laid webs	✓	✓	

Contacts

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Contacts

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Public Relations

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