

New Materials Fürth GmbH

Independent state research institution of the Free State of Bavaria

About this organisation

Machine translation

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

Neue Materialien Fürth GmbH (NMF) is an application-oriented state research centre of the Free State of Bavaria with the aim of implementing new materials and manufacturing processes in industry-oriented solutions in close cooperation with research institutes and partners from industry. At NMF, new manufacturing processes are realised for the first time in pilot plant operation on industrial-grade equipment with unique selling points.

* Magnesium injection moulding and die casting. Development of new alloys, particle- and fibre-reinforced components and hot runner technology. Material optimisation for casting tools and aggregates, microstructure optimisation through heat treatment, corrosion protection and process development for hybrid components. * Several calculation platforms for casting simulation and long-standing users. Calculation of mould filling, solidification or formation of residual stresses. Development of customised system solutions. * Production, functionalisation and further processing of long-fibre-reinforced thermoplastics (organic sheets) in process chains suitable for series production. * Future-orientated forming technologies for lightweight structures in lightweight sheet metal construction * Continuous powder extrusion (Temconex® technology) for the production of semi-finished products, wires and tubes made from aluminium, copper and silver alloys, including chip material and MMCs * Additive manufacturing (3D printing) for nickel-based, titanium and aluminium alloys.

Dr.-Mack-Str. 81
90762 Fürth
Bavaria
Germany
www.nmfgmbh.de



Organisation type

Non-university research institution

Sectors



Employees

10 up to 49

Turnover

€2m - €10m

Funding



[Projects in the funding catalogue](#)

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Main areas covered

Long fibre reinforced thermoplastics, Magnesium injection moulding, Lightweight sheet metal construction, Additive manufacturing (NB, titanium, aluminium), Continuous Powder extrusion presses

Infrastructure

Intermittent hot press, organic sheets, Magnesium injection moulding systems, Additive manufacturing, 3D printers, CAE tools, casting simulation, Injection moulding machines, forming presses

Certifications

Keywords

Organosheets, 3D printing, Magnesium, Simulation, Lightweight sheet metal construction

Memberships

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts, Software & databases, Materials	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Prototyping, Validation, Simulation, Technology transfer	✓	✓	
Field of technology			
Design & layout Hybrid structures, Lightweight construction concepts	✓	✓	✓
Functional integration Material functionalisation	✓		
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), Environmental simulation, Materials analysis	✓	✓	
Modelling and simulation Loads & stress, Optimisation, Processes, Structural mechanics, Materials	✓	✓	✓
<i>Plant construction & factory automation</i>			
<i>Recycling technologies</i>			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Electron beam melting, Selective laser melting (SLM, LPBF, ...), Selective laser sintering (SLS)	✓	✓	
<i>Coating (surface engineering)</i>			
Fibre composite technology Others: null	✓	✓	✓
Forming Impact extrusion, Compression moulding, Extrusion moulding, Thermal converting, Rolling, Others: null	✓	✓	
<i>Joining</i>			
<i>Material property alteration</i>			
Primary forming Casting, Pultrusion, Injection moulding	✓	✓	
<i>Processing and separating</i>			
<i>Textile technology</i>			

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	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
Composites Aramid fibre composites, Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Natural fibre reinforced plastics (NFRP)	✓	✓	
Fibres Aramid fibres, Glass fibres, Carbon fibres, Natural fibres	✓		
<i>Functional materials</i>			
Metals Aluminium, Magnesium, Titanium	✓		
Plastics Thermoplastics	✓		
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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Contacts

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