

Friederich-Alexander-University Erlangen-Nuremberg FAU

Chair of General Material Properties WW I

About this organisation

Machine translation

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

The WWI Chair is concerned with the investigation of mechanical properties and microstructure from the nanoscale to the macroscale under a wide variety of differentiated load cases, such as high-temperature deformation, fatigue, creep and wear. The focus is on researching the structure-property correlation.

The Light Metals & Mechanical Testing group at the Chair of WWI focuses on research into aluminium, magnesium and titanium alloys, particularly for structural automotive and aerospace applications. Activities are concentrated on determining the correlation between process parameters, the resulting microstructure and the resulting properties. In combination with research into the dominant damage mechanisms, it is thus possible to specifically influence or improve material/component properties based on mechanisms. Current research topics include wrought and cast aluminium alloys as well as titanium alloys. However, other materials, such as copper alloys or electrical sheets, are also the subject of current work. In all cases, an in-depth understanding of the process-microstructure-property correlation is essential, which is based on extensive material characterisation.

Martensstraße 5
91058 Erlangen
Bavaria
Germany
www.ww1.tf.fau.de/



Organisation type

University or higher education institution

Sectors



Employees

500 and more

Turnover

n/a

Funding

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Chair of General Material Properties WW I

About this organisation

Main areas covered Alloy development, Mechan. Properties, Microstructure analysis, Damage mechanisms, Structure-property correlation

Infrastructure

Certifications

Keywords

Memberships

Overview of lightweighting expertise

Machine translation

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	Research	Development	Manufacturing & Supply
Offer			
<i>Products</i>			
Services & consulting Validation, Technology transfer, Others (Material selection and quality assurance)	✓	✓	
Field of technology			
<i>Design & layout</i>			
<i>Functional integration</i>			
<i>Measuring and testing technology</i>			
<i>Modelling and simulation</i>			
<i>Plant construction & automation</i>			
<i>Recycling technologies</i>			

Overview of lightweighting expertise

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**Research Development Manufacturing
& Supply**

Manufacturing process

Additive manufacturing

Coating (surface engineering)

Fibre composite technology

Forming

Joining

Material property alteration

Primary forming

Processing and separating

Textile technology

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
<i>Composites</i>			
<i>Fibres</i>			
<i>Functional materials</i>			
Metals Aluminium, Intermetallic alloys, Magnesium, Steel, Titanium	✓	✓	
<i>Plastics</i>			
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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Contacts

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Group management

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