

# 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.

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Bavaria  
Germany  
[www.ww1.tf.fau.de/](http://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
<b>Offer</b>			
<i>Products</i>			
<b>Services &amp; consulting</b> Validation, Technology transfer, Others (Material selection and quality assurance)	✓	✓	
<b>Field of technology</b>			
<i>Design &amp; layout</i>			
<i>Functional integration</i>			
<i>Measuring and testing technology</i>			
<i>Modelling and simulation</i>			
<i>Plant construction &amp; 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

### Machine translation

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	Research	Development	Manufacturing & Supply
<b>Material</b>			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
<i>Composites</i>			
<i>Fibres</i>			
<i>Functional materials</i>			
<b>Metals</b> 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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