EUROMAT 2017/ Symposia Structure/Area B

B.11

Title: Mechanical Properties and Microstructure

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Summary

Understanding the correlations between microstructure of structural materials and their mechanical properties is a prerequisite for both, alloy development and reliable component design. Hence, the symposium “Mechanical Properties and Microstructure” aims to promote high-level scientific exchange in this important field of materials science and engineering. It covers the whole range of structural materials ranging from metals over polymers and ceramics to fiber and particle reinforced compounds. Quasistatic loadings, creep, low- and high-temperature fatigue, thermomechanical fatigue as well as creep-fatigue interaction will be considered.

The symposium features the following topics:

- Microstructure-property relationships of metals in quasistatic loading at ambient and elevated temperatures
- Cyclic deformation and crack initiation in low- and high-temperature fatigue of metals
- Thermomechanical fatigue and creep-fatigue interaction of metals
- Fatigue crack growth and microstructure
- Very high cycle fatigue of metals and compound materials
- Deformation and fatigue of polymers

Scientists working in one or more of the above mentioned research topics are encouraged to submit their abstracts until the deadline specified in the EUROMAT call-for papers.

We’re looking forward meeting you at EUROMAT 2017,

Tilmann Beck and Frank Walther.