

# MSE 2024

24 - 26 Sep 2024 (Darmstadt)

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## S: Structural Materials

The Topic S: Structural Materials will provide a platform for in-depth assessment of structural materials, and critically examine the relationships between the structure of materials and their properties, performance as well as reliability. The scientific basis that governs the development of novel, sustainable engineering materials for advanced structural applications will be the main focus, encompassing metallic, ceramic, polymeric, or composite materials. Contribute and collaborate in the discussions seeking to push the boundaries of material science. By this, the topic will pave the way to establish a solid platform for a future with improved and well-characterized materials for various applications.

### Topic coordinator



Prof. Dr. Mathias Göken  
Friedrich-Alexander-Universität Erlangen-N...



Prof. Dr. Eduard Hryha  
Chalmers University of Technology



Prof. Dr.-Ing. Thomas Niendorf  
University of Kassel

#### S01: The Matrix of Performance - Unravelling Structural Materials - General Symposium Topic S

Prof. Dr. Mathias Göken (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)), Prof. Dr. Eduard Hryha (Chalmers University of Technology), Prof. Dr.-Ing. Thomas Niendorf (University of Kassel)

#### S02: High Entropy Alloys: From basic research to industrial applications

Prof. Dr. Sheng Guo (Chalmers University of Technology), Dr. Jörg Kaspar (Fraunhofer Institute for Material and Beam Technology IWS Dresden)

#### S03: Metallic High Temperature Materials for Structural Applications

Melissa Allen (AMG Titanium Alloys & Coatings), Prof. Dr.-Ing. Manja Krüger (Otto von Guericke University Magdeburg), Dr. Steffen Neumeier (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)), Prof. Dr. Florian Pyczak (Helmholtz-Zentrum hereon GmbH), Jun. Prof. Dr.-Ing. Anke Silvia Ulrich (University of Bayreuth)

#### S04: Advanced Steels

Prof. Dr.-Ing. habil. Ulrich Krupp (RWTH Aachen University), Prof. Dr.-Ing. Ulrich Prah (TU Bergakademie Freiberg)

#### S05: Wire-Arc-Additive-Manufacturing of multi-metal-composites

Prof. Dr. Jean Pierre Bergmann (Technical University of Ilmenau), Prof. Dr. Volker Wesling (Technische Universität Clausthal)

#### S06: Intermetallic phases in Aluminum Alloys: Precipitation Phenomena, Particle formation, their Structure and Effects on Properties

Dr. Hanka Becker (TU Bergakademie Freiberg), Prof. Dr. Yanjun Li (Norwegian University of Science and Technology), Prof. Dr. Stefan Pogatscher (Montanuniversität Leoben)

#### S07: Structural lightweight magnesium alloys: Processing - Microstructure - Property relationship

Dr. Jan Bohlen (Helmholtz-Zentrum hereon GmbH), Dr. Dietmar Letzig (Helmholtz-Zentrum hereon GmbH), Dr. Sangbong Yi (Helmholtz-Zentrum hereon GmbH)

#### S08: Process-Microstructure-Property Relationships in High-Performance Alloys produced by Additive Manufacturing

Dr.-Ing. Christian Haase (RWTH Aachen University), Prof. Dr. Andrey Molotnikov (RMIT University), Prof. Dr.-Ing. Thomas Niendorf (University of Kassel), Prof. Dr. Mohsen Seifi (ASTM International)

#### S09: Adiabatic shear band formation for functional surfaces - materials science, processing and modeling perspectives

Prof. Dr. Thomas Lampke (Chemnitz University of Technology), Prof. Dr. Martin Franz-Xaver Wagner (Chemnitz University of Technology)

#### S10: Recent Development in Metallic Materials for Sustainable Hydrogen Energy

Prof. Dr. Poulumi Dey (Delft University of Technology), Prof. Dr.-Ing. Enrique Galindo-nava (University College London), Prof. Dr. Xu Lu (Norwegian University of Science and Technology), Marta Muratori (Acerinox Europa S.A.U), Prof. Dr.-Ing. Ulrich Prah (TU Bergakademie Freiberg), Dr. Ali Smith (Rina Consulting- Centro Sviluppo Materiali SpA), Dr. Mahesh Somani (University of Oulu), Prof. Dr.-Ing. Wenwen Song (University of Kassel), Dr. Muhammad Yasir (FORVIA)

#### S11: Advanced Polymer-Amine Based Thermal Latent Curing Agents for One-Component Epoxy Resins

Prof. Dr. Bekir Dizman (Sabanci University)

