

FEMS EUROMAT23

03 - 07 Sep 2023 (Frankfurt am Main)

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FEMS EUROMAT is the most important international congress in materials science and technology in Europe. It continues a successful congress series promoting the transfer of knowledge and the exchange of experience between academia and industry. **Extended submission deadline: 15 March 2023**

Area C: Processing

C09: Thermomechanical Processing, Severe Plastic Deformation & Nanostructuring

The symposium focuses on the processing of metallic materials in order to achieve nano-crystalline (NC) or ultra-fine grained (UFG) microstructures. Emphasis is laid on new developments in severe plastic deformation (SPD) and thermomechanical processing (TMP) techniques or combinations of TMP and SPD and related nanostructuring processes. The second focus of the symposium is on advances in modeling and simulation of these processes, prediction of the microstructural evolution during processing, and industrial up-scaling strategies. Furthermore, contributions dealing with the Process-Microstructure-Properties correlation are highly appreciated. Another key area is alloy design by SPD, for example, mechanically driven phase transformations, formation of metastable phases, texture formation, and grain boundary engineering. The symposium will also cover strategies to enhance the microstructural stability, new developments of tailoring/grading and functionalization of materials by these processes, as well as principal investigations on the deformation mechanisms in NC/UFG materials.

This symposium is cooperating with the [European Journal of Materials \(EJM\)](#).

Symposium Organizer



Dr. Andrea Bachmaier
Austrian Academy of Sciences



Dr. Julia Ivanisenko
Karlsruhe Institute of Technology (KIT)

