Call for papers

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Deformation-influenced Microstructural Evolution of High-Temperature Alloys

High-temperature materials, e.g. superalloys, are used for critical components in the aerospace, power generation, and chemical processing industries, where they are subjected to extreme thermal and mechanical stresses. Understanding the microstructure formation and evolution in these materials during processing and in-service sustained deformation is crucial for the design of next-generation alloys and their performance optimization. This special topic aims to publish the latest findings on the mechanisms of and interactions between nucleation, growth, transformation, and deformation of the different phases of high-temperature materials under various processing and in-service conditions, as well as exploring novel defect-microstructure design strategies.

Original research papers should be 3,000-9,000 words with up to 12 figures maximum; review papers should be 6,000-11,000 words with up to 20 figures maximum.

Detailed author instructions are available at: http://www.tms.org/AuthorTools/

Keywords for this topic: Advanced Processing; Alloy Phases; High-Temperature Materials; Phase Transformations

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Committee Sponsor(s): High Temperature Alloys

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