Special Issue

Static and Dynamic Recrystallization, and Phase Transformation in Metallic Materials

Message from the Guest Editors

The occurrence of static and dynamic recrystallization and phase transformation has been the backbone of manufacturing and metallurgical engineering in the past decade to maximize the mechanical properties of alloys during processing. However, despite significant progress in this area, the rise of sophisticated materials testing methods and characterization techniques has presented opportunities to further push the mechanical properties of alloys to their limit by controlling the microstructure. This Special Issue of *Metals* invites experts from around the world to submit papers related to static and dynamic recrystallization and phase transformation, including transformation-induced plasticity, of various alloys such as but not limited to steels, nickel-based alloys, titanium alloys, magnesium alloys, aluminum alloys, and high-entropy alloys. Although these phenomena are common during deformation and cyclic heat treatment, papers related to other materials processing such as additive manufacturing are also welcome. This Issue is particularly interested in the microstructural analysis of alloys as well as the modelling of their behavior at room and high temperatures.

Guest Editors

Dr. Clodualdo Aranas

Prof. Dr. Hao Chen

Dr. Binhan Sun

Deadline for manuscript submissions

closed (28 February 2021)



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About the Journal

Message from the Editor-in-Chief

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editor-in-Chief

Prof. Dr. Yong Zhang

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

