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Microstructure and Mechanical Properties of Nanocrystalline Metals

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Deadline for manuscript submissions:
closed (31 August 2022)

Message from the Guest Editors

Dear Colleagues,

Nanocrystalline metals, with an average grain size below 100 nm, possess great mechanical properties and have become increasingly attractive in recent decades. The appealing mechanical properties of nanocrystalline metals are related to their microstructures. Understanding the microstructure–property relationship of nanocrystalline metals is therefore critical for material design to meet superior application requirements.

The aim of this Special Issue is to present the latest research on the theoretical and experimental investigations of the microstructure evolution in nanocrystalline metals subjected to different manufacturing processes, and of their mechanical properties. Papers dealing with processing techniques, microstructure characterization, mechanical behavior, modeling of mechanical behavior, modeling of microstructure, advanced application, etc. are encouraged.

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Message from the Editorial Board

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.

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