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Mechanical Behavior of Nanoporous Metallic Materials

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Message from the Guest Editor

Dear Colleagues,

Nanoporous metallic materials have emerged as a fascinating class of functional materials with diverse applications across various fields, including catalysis, energy storage, sensing, and biomedical engineering. The unique combination of high surface area, tunable pore size, and exceptional mechanical properties has spurred significant interest in understanding and manipulating their mechanical behavior. This Special Issue aims to showcase the latest advancements and discoveries in this rapidly evolving research area and to develop a set of structure–activity relationships between microstructure, mechanical properties, and deformation mechanisms through the exploration of the mechanical behavior of nanoporous metals, which is expected to provide important guidance for property prediction, structural orientation design, and functional optimization in practical applications.



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Special Issue



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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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