

Special Issue

Deformation of Metals and Alloys: Theory, Simulations and Experiments

Message from the Guest Editors

Metallic materials have many distinctive properties, the ability to undergo varying degrees of permanent deformation being one of special interest for processing. The cornerstone of studies on the plasticity of metals and their alloys was laid decades ago by eminent scientists such as Nabarro, Orowan, Peierls, and Cottrell, among others. Particularly groundbreaking was their discovery of the fundamental role of dislocations in metal plasticity and the subsequent development of a theory of dislocations. Currently, research on deformation remains extremely important to improve the mechanical properties of existing structural and functional materials and for the design of novel alloys. This Special Issue is open to theoretical, computational and experimental studies. To be considered for publication, papers should report fundamental and/or applied research or provide a relevant review on the deformation of metals and alloys.

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About the Journal

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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