

Special Issue

Deformation Behavior of the Alloys under Simple and Combined Loading Conditions at Various Deformation Rate

Message from the Guest Editors

Clarifying the mechanical behavior of alloys is quite important to evaluate their performance. Actually, alloys undergo not only simple loading, but also quite complicated loading conditions via combinations of simple loading with proportional and non-proportional histories. Additionally, products with high performance at high-speed deformation are quite useful to avoid the fatal accidents of transportation equipment. In both cases, strain rate sensitivity in the inelastic deformation of alloys holds the key, and it is important to clarify dynamic or impact effects of the phenomena. In the Special Issue, research works related to deformation behavior of alloys are invited, as well as interdisciplinary works concerning these topics. Fundamental research works on testing methods and computational simulations are also included. This Special Issue will be composed of articles reporting on new and progressive research results, and reviews of particular classes of fundamental deformation behaviors of alloys and their applications.

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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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