



Microstructure and Mechanical Property Relationships in Metallic Materials

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Message from the Guest Editor

Dear Colleagues,

The properties of metallic materials are influenced by their microstructures. The microstructure of metallic materials is described by grain size, types of phases present, and description of their structure, shape, and size distributions. The relation between fabrication and processing, microstructure and mechanical properties has been a topic of many studies. Clarification of the causes behind metal behavior under varying conditions and predicting the behavior of materials with certain structures can only be achieved through more in-depth knowledge of the metallic materials.

This Special Issue will include novel studies pertaining to the influences of processing technologies on the microstructural evolution; topics include but are not limited to conventional and new forms of fabrication techniques such as additive manufacturing and development of novel microstructures by means of thermomechanical treatments for required properties, as well as the analytical methods employed in elucidating the mechanical properties of metallic materials. Novel experimental and theoretical studies of the structure of the metallic material will also be considered.





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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.

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