



Advanced Metal Matrix Nanocomposites

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Message from the Guest Editors

Light alloys (for instance, aluminum and magnesium) that are traditionally used in the field of advanced metal matrix nanocomposites have reached the limit of their properties and new lightweight materials, such as metal matrix composites (MMCs) and metal matrix nanocomposites (MMNCs), are currently under development. However, the process of manufacturing MMCs and MMNCs faces a number of challenges. The first challenge that is evident is the selection of a technological route, for example, powder metallurgy, liquid-metal processing, and preform impregnation. The second is the selection of reinforcing phases and their morphology, such as particles or fibers. The third is the choice of the means by which to improve the introduction and dispersion of the reinforcements inside the matrix. This Special Issue addresses the areas of research concerned with the physical, mechanical, and functional properties of MMCs and MMNCs, including those reinforced with particles and fibers. Researchers are invited to submit articles that explore alternative directions in the research field for obtaining and investigating advanced metal matrix nanocomposites.





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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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