Special Issue

Metal Matrix Nanocomposites and Hybrids

Message from the Guest Editors

Metal matrix nanocomposites (MMNCs) and hybrids include metals reinforced with nanosized particles or nanostructures or the general combination of phases aiming to improve their properties in comparison with their counterpart alloys or pure metals. The main challenge in this type of material is their processing, mostly presenting complications in the densification of the matrix, adhesion, dispersion of reinforcements, and control of morphology of phases. Many different processing routes have been developed during the past few decades, such as stir casting, squeeze casting, chemical and physical vapor deposition (CVD and PVD), spray deposition, powder metallurgy, and severe plastic deformation. Therefore, metal matrix nanocomposites and hybrids are an interesting and exciting topic for researchers in academia and industry. The scope of this Special Issue will cover advances in the processing, microstructure, and properties of these materials. Additionally, new processing routes, such as additive manufacturing and severe plastic deformation, gradient structures, and advanced methods of characterization are also welcome.

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About the Journal

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.

Editor-in-Chief

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