Special Issue

Metals Powders: Synthesis and Processing

Message from the Guest Editor

Metallic parts can be obtained with a wide variety of techniques. One of these techniques, traditionally known as powder metallurgy, uses powders as the starting material, which are processed to obtain the final product. Powder synthesis through mechanical alloving. atomization, evaporation-condensation. electrochemical reduction processes, phase separation, etc., leads to different purities, alloy composition limits, particle sizes, shapes, and microstructures. This allows a wide variety of metal powders, not only regarding composition but also properties. These powders can then be processed through traditional press and sinter powder metallurgy techniques, hot isostatic pressing, injection molding, field-assisted electrical sintering techniques, thermal spray or additive manufacturing techniques, among others, leading to quite different final products. Articles and reviews on advances in known synthesis and processing technologies, and new developments in these research fields, both from academic and industrial researchers are welcome in this Special Issue.

Guest Editor

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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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