Special Issue

Recent Developments in Porous Metals and Metallic Foams

Message from the Guest Editor

The characteristic features of porous metals and metallic foams have interested scientists and industries for the past several decades. The cellular structure, with plenty of pores, causes unique properties, such as lightweight, impact energy absorption, acoustic damping, and low thermal conductivity. Many manufacturing processes have been developed since metallic foams appeared on the market in the mid-1950s. Fabrication techniques based on foaming, sintering or casting have made open or closed cell structures from solid, liquid or vapor metals. Although structural and functional applications, such as shock absorbers, filters, heat exchangers, and battery, are well known, commercial applications in the biomedical, architectural, and even artwork fields have emerged. Porous metals and metallic foams are expected to be useful materials for global issues, such as environmental preservation, energy problems, and aging societies. This Special Issue welcomes articles and reviews for the recent progress of research works on the science and technology of porous metals and metallic foams.

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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