Special Issue

Advanced Metallic Foams

Message from the Guest Editors

Metallic foams have become the most promising class of advanced materials due to their combination of unique properties such as high energy absorption and damping capacities, as well as their high stiffness-to-weight ratio. Advanced metallic foams consist of 3D networks of stochastically distributed pores that make them lightweight materials with improved crashworthiness performance. Due to their porous structures and lower density compared to most other advanced materials, they are mostly considered as energy absorbers in structural and automotive industries. However, other sectors, such as chemical and medicine, benefit from their unique characteristics. All these features make advanced metallic foams the ideal candidates for replacing high-density materials (e.g., steel, aluminum, etc.).

This Special Issue represents a good opportunity to disseminate different aspects related to recent developments in advanced metallic foams. Research and review articles, along with short communications, are invited for consideration in this Special Issue. If you have any questions or need further information about this Special Issue, please feel free to contact us.

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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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