Special Issue

Modeling, Testing and Applications of Metallic Foams and Cellular Materials

Message from the Guest Editors

Research on metallic foams, and more generally on cellular materials, is currently focused on different fields, such as numerical modeling, testing, material design, and manufacturing. Metallic foam applications concern lightweight and crashworthiness design. Cellular materials are also studied for multifunctional components, bioengineering, and biomimetic design. These research areas are extending thanks to technological innovation and new design methodologies. For these reasons, I believe that a multidisciplinary perspective may support the understanding of the state of the art related to cellular material applications, highlighting advantages and disadvantages and, more importantly, discussing new numerical and experimental approaches to investigate the open questions related to their applications. This Special Issue welcomes papers on cellular materials aiming to present design methodologies, problems, and applications related to numerical modeling through finite element analysis, design optimization, and validation. Multidisciplinary research is encouraged, especially if it is related to integrated product-process design and multifunctional applications.

Guest Editors

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Deadline for manuscript submissions

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About the Journal

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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