Special Issue

Additive Manufacturing of Cellular Structures Based on Metal Materials

Message from the Guest Editor

During the last decade, regular cellular structures have attracted the attention of many scientists because of their specific mechanical properties, including a low mass and high strength. Additionally, the dynamic progress of additive manufacturing technologies provides a possibility to produce complex topologies, which would constitute a challenge to the standard methods. Therefore, the main aim of this Special Issue is to publish scientific papers covering the recent problems related to the additive manufacturing of 2D and 3D regular cellular structures using metal materials, including the following:

- mechanical behavior in terms of energy-absorption and crashworthiness capabilities;
- experimental testing under quasi-static and dynamic conditions;
- numerical modelling and simulation coupled with experimental tests;
- microscopic studies of additively manufactured materials;
- fracture and damage under low and high strain rates

Hopefully, the presented Special Issue will receive many excellent papers covering the key aspects of experimental tests, material studies, and the numerical modelling and simulations of regular cellular structures.

Guest Editor

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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

Prof. Dr. Yong Zhang
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