



Design, Processing and Characterisation of Metallic Materials

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Message from the Guest Editors

The interplay between the processing, microstructure and properties of materials has always been a high priority in materials science and technology, and will be reflected in the studies in this Special Issue. The leap forward in the characterization of materials (X-ray, high-resolution SEM or TEM and spectroscopy) enables better description of material reactions when new process routes are used. By means of new processes—additive manufacturing (e.g., direct energy deposition, selective laser beam melting) and joining by forming should be highlighted here—innovative design approaches can be implemented and the idea of sustainability is addressed by optimized material selection, reduced material waste and reevaluated recycling routes.

This Special Issue aims to compile a list of scientific papers focusing on the design, processing and characterization of metallic materials that have contributed to our understanding of material behavior. The goal of this Special Issue is to continue to show the advances in characterization methods. It should become clear that design, processing and characterization must go hand in hand.





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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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