Special Issue

Recent Advances in Cast Irons

Message from the Guest Editors

Cast irons are the most used casting alloys after steels thanks to their excellent castability, which makes it possible to obtain near net shape components with a complex geometry directly by moulding, without subsequent forging or machining processes. Cast irons also offer the design engineer a low-cost material with good machinability, vibration damping and corrosion strength, and a relatively high wear resistance because graphite acts as a self-lubricating system.

For a certain chemical composition, the optimization of the process parameters, solidification conditions and heat treatment is essential to achieve the optimal combination of microstructure and mechanical properties. The aim of this Special Issue “Recent Advances in Cast Iron” is to collect full papers, communications and review articles highlighting recent achievements on cast irons, with a special focus on the relationship between microstructural features and mechanical behaviour. Submissions of works dealing with corrosion resistance and coating systems for applications in different industrial fields are also encouraged.

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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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