Special Issue

Casting Alloy Design and Characterization—2nd Edition

Message from the Guest Editors

Metal casting processes normally used in the foundry industry (e.g., gravity or pressure casting) are subjected to a wide range of operational parameters. Since there is a close correlation between solidification conditions, microstructure and properties, the effects of solidification conditions and alloying elements on microstructure design and the resulting properties in cast alloys have stimulated new research interest. Thus, this Special Issue aims to collect research articles focused on the design and characterization of cast alloys, especially on the interrelationship between solidification, microstructure and properties; both experimental and theoretical research are welcome.

The scope of the Special Issue includes, but is not limited to, the following technical topics:

- Casting processes and novel techniques;
- Solidification: experimental and theoretical studies;
- Microstructures and properties characterization;
- Numerical and analytical simulations;
- Heat and mass transfer;
- Processing-structure-property relations;
- Industrial applications.

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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

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