

## Special Issue

# Solidification, Microstructure and Mechanical Properties of Cast Alloys

### Message from the Guest Editors

The world of materials is strictly meritocratic, as materials compete for use solely on merit and performance. Metal casting is an industry with impressive longevity, going back many centuries. Metal casting has survived in the materials competition based on merit, as castings and casting materials have evolved from jewelry, architecture, and culinary uses to the high-tech contemporary materials used in automotive safety parts and engines, railways, valves, oil and gas, wind turbine electricity generators, and many other applications. To remain competitive as human society progressed from the Iron Age to the Age of Engineered Materials, cast alloys had to incorporate the ever-expanding knowledge of humanity. Suffice it to mention that the first man-made metal-based composite, cast iron, is indeed a graphite–iron composite. This is further confirmation that cast metals have achieved the status of a high-tech material.

Articles that focus on the latest progress in the industry, including the manufacturing process, solidification science and engineering, and materials properties, are welcome. Papers discussing software used in the industry for process control will also be of interest.

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### Guest Editors

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### Deadline for manuscript submissions

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## Metals

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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.

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### Editor-in-Chief

Prof. Dr. Yong Zhang

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