



Solidification Processing of Metal Alloys under External Fields

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Message from the Guest Editors

Dear Colleagues,

Almost all metal alloys are manufactured via solidification processes, and the mechanical properties of the cast ingots or components are predominantly determined by the as-cast grain microstructure formed during the solidification processes. The use of external fields has become widespread in a drive for improved materials or a better understanding of fundamental phenomena. Thus, we are delighted to extend an invitation to scientists and researchers to contribute to our Special Issue.

This Special Issue will explore the intricate relationship between solidification microstructure/structure and external fields, encompassing phenomena such as solidification under the influence of robust gravitational, acoustic, or novel electromagnetic fields. Original research articles, short summaries, communications, and comprehensive reviews are welcomed.

The potential subjects include, but are not limited to:
Microstructural evolution during solidification under external fields;
Solidification theory under external fields;
Ultrasonic melt processing;
Electromagnetic shaping;
Magnetic field-assisted material processing;
Numerical simulation of solidification process.





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Message from the Editor-in-Chief

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