Special Issue

Solidification Processing of Metal Alloys under External Fields

Message from the Guest Editors

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.

Guest Editors

Dr. Ling Qin

Dr. Yanchun Zhu

Prof. Dr. Jianfei Zhang

Dr. Yang Qin

Prof. Dr. Marek Sroka

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Crystals
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

mdpi.com/journal/crystals

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About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

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