Special Issue

Advances in Processing, Simulation and Characterization of Alloys

Message from the Guest Editors

The core of physical metallurgy is the processingmicrostructure-properties relationship in metals and alloys. The ever-increasing demand for alloys with mechanical properties has led to the development of sophisticated processing methods and the incorporation of high-resolution characterization techniques regarding microstructural constituents. Moreover, the computational modeling and simulation of processes and microstructures at multi-scale levels is a cost-effective solution, providing insights into how various parameters influence the microstructureproperties relationships in alloy design. The aim of this Special Issue is to bring together experts from academia and industry in order to encapsulate the current state of the art in the fields of processing, modeling, and simulation approaches in manufacturing processes and microstructural evolution, as well as characterization techniques, in order to gain a deeper understanding of properties-microstructure relationships. We welcome submissions in the form of both research articles containing original experimental and/or computational results or review articles.

Guest Editors

Dr. Marianthi Bouzouni

- Department of Physical Metallurgy and Forming, Hellenic Research Centre for Metals S.A.—ELKEME S.A, 61st km Athens-Lamia Nat. Road, 32011 Oinofyta, Greece
- Laboratory of Physical Metallurgy, Division of Metallurgy and Materials, School of Mining & Metallurgical Engineering, National Technical University of Athens, 9, Her. Polytechniou Str, Zografos, 15780 Athens, Greece

Prof. Dr. Shouxun Ji

Brunel Centre for Advanced Solidification Technology (BCAST), Brunel University London, Uxbridge UB8 3PH, UK

Deadline for manuscript submissions

20 December 2024



an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 4.2



mdpi.com/si/188427

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

mdpi.com/journal/ crystals





an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 4.2



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, Pl, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)

