Special Issue

Advances of Aluminum Alloys: Innovation and Application Potential

Message from the Guest Editors

High market demands related to material and property quality strongly influence the redesigning of common aluminium alloys. The quality of aluminium alloy components and associated obtained mechanical properties are strongly dependent on the casting process and its parameters, as well as chemical composition. Therefore, the (re)designing of the chemical composition of high-strength aluminium alloys has become significant for safety-critical structural components in numerous industries. The goal of this Special Issue is to highlight trends in (re)designing the chemical composition and solidification sequence with reference to advanced properties, investigation, and simulation, including the multi-scale approach, process parameters, and new opportunities in innovative aluminium alloys' application. It is our pleasure to invite you to submit a manuscript to this Special Issue. Full papers, communications, and reviews are all welcome.

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Deadline for manuscript submissions

closed (31 December 2023)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/109569

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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

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