Special Issue

High-Performance Metallic Materials

Message from the Guest Editors

In this Special Issue, we aim to receive papers that systematize processing–structure–property relationships in high-performance metallic materials through systematic examinations and analyses for macro-, micro-, and nano-structures evolved during the plastic deformation concomitant with both severe plastic deformation (i.e., cold and hot forging, rolling, extrusion, swaging, wire drawing, and hot pressing), as well as additive manufacturing. In addition, we are seeking studies that combine simulations and experiments to investigate high-performance metallic materials fabricated by advanced processing technology.

- The development of novel high functional metallic alloys;
- The high-temperature strength and plastic deformation of superalloys;
- The phase transformation and hot deformation behaviours of light metals (i.e., Mg and Al).
- The microstructural control and deformation processing of structural titanium alloys;
- The additive manufacturing and computer simulations of microstructural evolution.

Guest Editors

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Deadline for manuscript submissions

closed (15 July 2025)

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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

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