



Development of Light Alloys and Their Applications

Guest Editors:

Dr. Hua Qian Ang

School of Engineering, RMIT
University, Melbourne, VIC 3001,
Australia

Dr. Gulshan Kumar

Department of Mechanical
Engineering, BITS Pilani Dubai
Campus, Dubai 345055, United
Arab Emirates

Dr. Erdem Karakulak

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

Deadline for manuscript
submissions:

closed (10 December 2025)

Message from the Guest Editors

Dear Colleagues,

Magnesium, aluminium, and titanium are often classified as light alloys because of their high strength-to-weight ratio and/or high stiffness-to-weight ratio. These light alloys have significant commercial importance. The most commonly used of the light alloys are aluminium alloys, not only in automotive and aerospace applications but also for cans and foils. Today, titanium alloys and magnesium alloys are becoming more widely used. Titanium alloys are mostly used in the aerospace industry due to their low density and high strengths, especially at high temperatures. Other applications of titanium alloys include marine and petrochemical applications due to their excellent corrosion resistance. Magnesium alloys, however, are used when further savings in weight are required, for example, in components for aircraft, material-handling equipment, and portable power tools. Although light alloys have been successfully applied in various fields, there are still some shortcomings to overcome. Research on light alloys is still in progress.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Alessandra Toncelli

Department of Physics, University
of Pisa, 56126 Pisa, PI, Italy

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.

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](#), [Ei Compendex](#), [CAPlus / SciFinder](#), and [other databases](#).

Journal Rank: JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)

Contact Us

Crystals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/crystals
crystals@mdpi.com
[X@Crystals_MDPI](#)