Special Issue

Crystal Structure and Magnetic Properties of Intermetallics

Message from the Guest Editor

Magnetic intermetallic compounds are known for their intricate crystal, electronic, and magnetic structures, exhibiting remarkable properties, such as the giant magnetocaloric effect, half-metallic behaviors, giant magnetoresistance, strong magnetocrystalline anisotropy, and magnetostriction. These fascinating characteristics have attracted significant research interest due to their potential applications in magnetic refrigeration, spintronics, magnetic recording, and permanent magnets. Recently, the relationships between crystal structure, electronic structure, chemical bond, magnetic structure, and magnetic properties have been extensively studied using theoretical, computational, and experimental methods.

To highlight recent advancements, this Special Issue aims to gather papers on a broad spectrum of topics related to magnetic intermetallic compounds. These topics include crystal, electronic, and magnetic structures; chemical bonds; magnetocrystalline anisotropy; exchange interaction; hard magnetic materials; Heusler alloys; magnetocaloric effects and materials; magnetostrictive materials; magnetic shape memory alloys; and magnetic alloys for spintronic devices.

Guest Editor

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Deadline for manuscript submissions

closed (25 June 2025)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/222054

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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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