

## Special Issue

# Superconductors and Magnetic Materials

### Message from the Guest Editors

This Special Issue focuses on the development and application of improved superconductor compounds, high-remnant-flux permanent magnets, and high-magnetic-permeability materials for power applications.

This Special Issue welcomes the submission of studies on the development of material crystals consisting of novel and doped compounds for superconductor bulks, wires and tapes, high-remnant-flux permanent magnets and high-magnetic-permeability materials. These include superconducting compounds that reach superconductivity states at atmospheric pressure. High-magnetic-permeability materials include soft and hard ferrites, silicon-iron and cobalt-iron-based alloys. High-remnant-flux permanent magnets include alnico, neodymium-iron-boron and samarium-cobalt-based alloys.

This Special Issue also welcomes the studies on the variation in the electromagnetic characteristics of new and existing superconducting and magnetic materials in different pressure and temperature operating conditions, and the assessment of the utilization of rare-earth-free magnetic materials in power applications.

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### Guest Editors

Dr. António José Arsénio Costa

Prof. Dr. Elkin Ferney Rodriguez Velandia

Dr. João Filipe Pereira Fernandes

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### Deadline for manuscript submissions

closed (31 May 2025)



## Crystals

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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.

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### Editor-in-Chief

Prof. Dr. Alessandra Toncelli

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