Special Issue

Superconductivity and Condensed Matter Physics

Message from the Guest Editor

In recent years, achieving high-temperature superconductivity has captured significant attention due to its potential for transformative applications in the electronics, computing, and energy fields.

Recently, there have been numerous advancements in superconductors: (i) The discovery of room-temperature superconductivity in various hydrides under high pressure has ignited another wave of research focused on identifying high-temperature superconductors that can function at ambient conditions. (ii) The thrilling discovery of nickel-based superconductors has directed attention toward correlated quantum materials and their unconventional superconductivity. (iii) Extensive research has been devoted to the spin-triplet superconductor UTe2 to develop robust qubits for quantum information processing and achieve topological superconductivity.

This Special Issue invites papers on, but not limited to, the following topics: design, synthesis, and characterization of superconductors; studies on bulk, nano-, and low-dimensional crystals; Cooper pairing mechanisms; and theoretical calculations of the electronic structures of parent, doped, and nanostructured superconductors.

Guest Editor

Dr. Byungkyun Kang

College of Arts and Sciences, University of Delaware, Newark, DE 19716, USA

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Crystals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

mdpi.com/journal/crystals

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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

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

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