

## Special Issue

# Metamaterials and Their Devices

### Message from the Guest Editors

Over the past two decades, metamaterials (MMs) have led a revolution in new material science through the artificial arrangement of electric- and magnetic-resonance structures (meta-atoms) at subwavelength scale. The main reason for the attention paid to MMs is that they are very close in appearance to real life, such as perfect absorbers. EM MMs reveal remarkable responses to the incident EM wave, such as negative-refraction index, extraordinary optical transmission, electromagnetically induced transparency-like effects, and ultra-thin and broadband absorbers. The designed structures, the structural parameters, and the properties of used materials yield the effective electric permittivity ( $\epsilon_{\text{eff}}$ ) and the effective magnetic permeability ( $\mu_{\text{eff}}$ ) of overall MMs, based on the effective-medium theory. Studies on the control of EM response and its spatial distribution and dispersion are ripe and lead to potential and almost-realized applications. There are emerging fields in MM research, such as nonlinear, switchable, gain-assisted, sensor, quantum, and coding MMs, all representing a variety of MM applications.

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### Guest Editors

Prof. Dr. Youngpak Lee

Dr. Haiyu Zheng

Dr. Bui Xuan Khuyen

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### Deadline for manuscript submissions

closed (30 September 2024)



## Crystals

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*Crystals*  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[crystals@mdpi.com](mailto:crystals@mdpi.com)

[mdpi.com/journal/  
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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  
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

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