

Special Issue

Halide Perovskite Crystal Materials and Optoelectronic Devices

Message from the Guest Editor

Halide perovskite single crystals are an emerging material for a diverse range of optoelectronic devices due to their low trap density, superior properties, and low-cost growth. Since 2009, halide perovskite materials have attracted great attention in the optoelectronic field due to their superior properties.

This Special Issue aims to collect recent investigations of halide perovskite single-crystal growth and device application and promote the future development of this emerging research field. We encourage researchers to submit their latest original research articles, perspectives, or reviews on themes that include, but are not limited to, the following:

Novel growth strategies to modulate the defects, quality, and carrier transport properties of halide perovskite single crystals;

Explorations of novel properties and applications of halide perovskite crystals;

Designs of halide perovskite single crystals with new compositions, in particular, with lead-free materials;

Advanced device structures and performance based on perovskite single crystals;

Degradation mechanisms of halide perovskite single-crystal materials and devices.

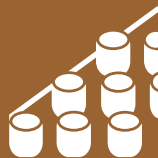
Guest Editor

Prof. Dr. Zhaolai Chen

State Key Laboratory of Crystal Materials, Institute of Crystal Materials, Shandong University, No. 27 Shanda South Road, Jinan 250100, China

Deadline for manuscript submissions

20 January 2026



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/219204

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

[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)





Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)



About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Condensed Matter Physics)