Special Issue

Research Progress of Advanced Crystals: Growth and Doping

Message from the Guest Editors

Crystalline materials, including but not limited to Gallium Nitride (GaN), are wide-bandgap semiconductors characterized by high breakdown voltage and improved electron mobility. Research into the growth and properties of various crystalline materials has significantly advanced the fields of optoelectronics and electronics. However, the presence of low-quality crystals, which often exhibit high dislocation density, low transparency, and a small radius of curvature, poses challenges for the development of high-performance devices. Therefore, the pursuit of high-quality, large-size, and cost-effective crystalline materials is essential for enhancing device performance and expanding their applications. As part of this Special Issue, we invite submissions that investigate the physical and chemical phenomena associated with the vapor and liquid phase growth of various crystalline materials, along with theoretical and experimental studies related to these processes. We will also emphasize research that analyzes the effects of doping on the properties of crystals.

Guest Editors

Dr. Lei Zhang

State Key Laboratory of Crystal Material, Shandong University, Jinan, China

Dr. Songyang Lv

Institute of Novel Semiconductors, State Key Lab of Crystal Materials, Shandong University, Jinan 250100, China

Deadline for manuscript submissions

20 August 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/193411

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

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

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)