

Special Issue

Recent Advances and Applications in Diamond Materials

Message from the Guest Editor

Diamond has garnered increasing attention in the field of materials science due to its outstanding combination of physical and chemical properties, including exceptional mechanical hardness, high thermal conductivity, wide electronic bandgap, chemical inertness, and equivalence to biological tissues.

This Special Issue aims to collect high-quality contributions focusing on recent advances in the synthesis, characterization, and application of diamond materials, providing a comprehensive yet focused overview of current research directions.

Topics of interest include, but are not limited to, the following:

- Growth techniques and synthesis of diamond films and nanostructures;

- Surface and bulk modification and functionalization;

- Mechanical, structural, chemical, thermal, electronic, optical, and photoelectronic properties;

- Defects, doping, and color centers for quantum applications;

- Diamond-based devices and systems, including modelling and simulation;

- Integration with other materials and heterostructures;

- Applications in sensing, medicine, electronics, photonics, and energy.

Guest Editor

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Deadline for manuscript submissions

31 January 2027



Materials

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 7.0
Indexed in PubMed



mdpi.com/si/284608

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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.

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