

Special Issue

Advancements in Graphyne-Based Materials: From Synthesis to Applications

Message from the Guest Editor

Over the years, the properties and functionalities of materials have been upgraded through the incorporation of novel components and nanostructures, which potentialize their performances in a continuously growing array of applications. As an example of carbon-based nanostructures, such as carbon nanotubes, fullerenes, carbon quantum dots, and graphene, graphyne has attracted great attention due to the unique properties it possesses, which are related to the combination of sp and sp² bonding centres (hybridization) in the 2D nanostructure. Like its congeners, graphyne has brought about exciting improvements when associated with different classes of materials. These improvements have encouraged research devoted to the development of the properties of graphyne and materials containing graphyne and graphyne family members (GFMs). This Special Issue of *Materials* focuses on the publication of top-quality experimental and theoretical research devoted to the study and development of graphyne and graphyne-based materials, in which this association brings irrefutable improvement governed by the special properties of graphyne, leading to its relevant application in different fields.

Guest Editor

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Deadline for manuscript submissions

20 February 2026



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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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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