Special Issue

Carbon-Based Functional Nanomaterials: Preparation, Properties and Applications

Message from the Guest Editor

Carbon is an extremely versatile element, characterized by a variety of allotropes and structures with different properties due to their sp, sp2 or sp3 hybridization. Tremendous progress has been made in the area of carbon nanomaterials since the discovery of buckminsterfullerene in 1985 by Smalley, Kroto and Curl. In the following decades, a great number of novel nanostructured modifications of carbon, namely nanoscale diamonds, carbon nanotubes, and graphene, have been prepared and over a hundred more carbon allothropes theoretically predicted. Due to their unique structural dimensions and excellent mechanical, electrical, thermal, optical and chemical properties, these materials have attracted significant interest in diverse areas. The scope of this Special Issue is to illuminate the most recent developments of research on the production, characterization, properties and broad applications of multifunctional carbon-based nanomaterials, as well as to cover the current challenges and opportunities in their industrial acceptance and potential technological scale-up.

Guest Editor

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Deadline for manuscript submissions

closed (20 February 2025)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/172407

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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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