Special Issue

Synthesis and Characterization Techniques for Nanomaterials

Message from the Guest Editor

Techniques for the synthesis and characterization of nanomaterials are essential for understanding and manipulating materials' unique properties at the nanoscale. This variety of uses for nanomaterials is mirrored by an equally large diversity of methods of synthesizing them, including top-down methods—e.g., ion implantation, laser ablation, sol–gel, chemical vapor deposition, ball milling, and chemical reactions—or bottom-up approaches such as molecular beam epitaxy and self-controlling growth in solutions. Characterization techniques such as electron microscopy, X-ray diffraction, and spectroscopy are then employed to analyze the size, shape, structure, and composition of nanomaterials. Characterizing the properties of these nanomaterials can be performed using almost all of the techniques available in physics, chemistry, and engineering. This Special Issue offers authors a platform to present their latest research, as well as comprehensive reviews or articles, on the synthesis and characterization of nanomaterials in any field of application or fundamental investigation.

Guest Editor

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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/206547

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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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