Special Issue

Advances in Plasma Treatment of Materials

Message from the Guest Editor

Plasma technology has emerged as a versatile tool for material processing, offering precise control over material properties at the nanoscale. This Special Issue focuses on the latest advancements in plasma-based techniques for material deposition, etching, surface modification, fabrication, and functionalization. Contributions will explore innovative plasma sources, reactor designs, and process parameters with which to optimize material properties. Topics of interest include plasma-assisted deposition of thin films with tailored functionalities, the precise etching of complex patterns, surface modification for improved adhesion, wettability, and biocompatibility, the fabrication of novel nanomaterials, solid waste decomposition, steel modification against corrosion, etc. Research articles, review articles, and communications related to experimental, theoretical, and simulation studies on the devices, processes, and applications of plasmas for material processing are all invited.

Guest Editor

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Deadline for manuscript submissions

closed (20 April 2026)

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Message from the Editorial Board

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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