

Special Issue

Advanced Laser and Optical Methods for Material Analysis, Surface Engineering, and Performance Enhancement

Message from the Guest Editors

Laser and optical techniques are playing an increasingly important role in materials science, offering powerful ways to analyze materials, engineer surfaces, and enhance performance. Methods such as Laser-Induced Breakdown Spectroscopy (LIBS), Raman spectroscopy, and other optical approaches, combined with surface processing and coating technologies, allow researchers to better understand material composition, structure, and properties. This Special Issue aims to bring together research exploring these techniques in innovative ways, highlighting both experimental and modeling studies that advance material analysis and surface engineering. We welcome original research articles, reviews, and case studies on topics including laser-based surface modification, thin-film development, spectroscopic characterization, multiscale analysis, and performance optimization. Our goal is to provide a platform for sharing recent advances, fostering collaboration, and inspiring new directions in the use of laser and optical methods for functional materials.

Guest Editors

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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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