Special Issue

Laser-Assisted Fabrication of Functional Micro- and Nanomaterials

Message from the Guest Editor

Laser-assisted technologies are revolutionizing the fabrication of functional micro- and nanomaterials, enabling precise control over their structure, composition, and properties at multiple scales. Recent advances in ultrafast lasers, beam shaping, and process monitoring have greatly expanded the range of materials and functionalities that can be achieved through laser-based synthesis, modification, and patterning.

In this Special Issue, we aim to present the latest progress in laser-assisted fabrication methods, including additive and subtractive processing, laser ablation and melting, two-photon polymerization, laser-induced forward transfer, laser reduction, and nano-/microparticle generation. Emphasis will be placed on understanding how laser parameters influence morphology, crystallinity, and interfacial phenomena, as well as how these features determine material functionality. Topics of interest cover applications in electronics, photonics, sensing, and biomedical systems. Contributions addressing process scalability, reproducibility, sustainability, and integration with additive manufacturing or micro-/nanofabrication technologies are encouraged.

Guest Editor

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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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