

Special Issue

Advanced Laser Ablation and Damage in Materials

Message from the Guest Editors

Recent advances in high-power continuous-wave (CW) laser and short/ultra-short pulsed laser have introduced novel phenomena and mechanisms of ablation and damage in materials. To reveal the complex high-temperature and high-pressure physical and chemical processes with significant multiphase, multiscale and multifield coupling characteristics, advanced material models, computational methods, diagnostic technologies and artificial intelligent (AI) technology are required. The understanding of these ablation and damage behaviors could accelerate the application of high-power lasers in various industrial sectors, such as advanced manufacturing, thermal protection, laser cleaning, laser weapons, etc. This Special Issue aims to be a forum for the presentation of the latest developments in basic and applied research in the field of laser ablation and damage in materials. Potential topics include, but are not limited to:

- Phenomena and mechanisms of laser ablation and damage;
- Thermal and mechanical responses of metals, polymers, ceramics and their composite materials;
- Theoretical, numerical and experimental characterization;
- Applications of advanced laser ablation and damage.

Guest Editors

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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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