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Novel Laser Technologies and Their Applications

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Message from the Guest Editors

Dear Colleagues,

Recent advances in high-power laser technology have introduced novel phenomena and mechanisms in materials. To reveal the complex high-temperature and high-pressure physical processes with significant multiphase, multiscale and multifield coupling characteristics, we require advanced computational methods, diagnostic technologies and artificial intelligent (AI) technology. This understanding could accelerate the application of high-power lasers in various industrial sectors, such as advanced manufacturing, thermal protection, rock removal, laser cleaning, laser weapons, and a wide range of other areas.

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 interaction with matter. Potential topics include but are not limited to:

- Phenomena and mechanisms of laser ablation and damage;
- Theoretical, numerical and experimental characterization;
- Laser irradiation effect and mechanism;
- Laser spectrum technology and applications;
- High-power lasers.