Special Issue

High-Power Lasers for Materials Processing

Message from the Guest Editor

Power lasers have been around for a long time. Many lasers are available from different laser manufacturers. Lasers of high average power have multiple applications for working materials (drilling, sanding, hardening, welding, or cutting, etc.). The principle of laser welding is based on the fusion of a point of the material on which the beam will concentrate thanks to the optical system. After focusing, its illumination can reach more than 1 MW/cm^2. Lasers can be used for surface treatments. They can also be used to characterize the nature of materials by interacting with the medium, for example to form phononic waves in the material and allow the material to respond. Accordingly, this Special Issue seeks to showcase research papers, communications, and review articles that focus on the efforts made to solve problems, cut and treat surfaces, characterize materials, or any other application of these lasers.

Keywords:

- high-power lasers
- materials processing
- laser drilling
- laser sanding
- laser hardening
- laser welding
- laser cutting
- surface treatments

Guest Editor

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