Special Issue

Laser Welding and Surface Treatment of Advanced Materials

Message from the Guest Editors

Material-processing laser technologies are being increasingly used in the laser device industry. This is the result of dynamic developments in the field of the design and construction of laser devices, as well as in the improvement in the technical parameters of laser devices and the characteristics of laser radiation. One of the main applications of laser technologies is in the welding and surface treatment of materials. The laser beam, as a heat source, can provide high-power density and a low beam spot diameter in welding processes, thus providing high penetration depth; high welding speed; and low, controllable heat input. On the other hand, in the field of surface treatment, the flexibility of shaping laser beams can provide different beam spot profiles and sizes, and different beam spot energy distributions adjusted for controllable heating, melting, or evaporation of the substage material. Therefore, lasers are used in different processes of surface treatment. The Special Issue is to present the latest developments in the field of research on laser welding technologies and surface treatment technologies. We look forward to receiving your contributions.

Guest Editors

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Deadline for manuscript submissions

20 March 2026

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/251164

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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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