

Special Issue

Laser Materials Processing Technology

Message from the Guest Editor

Lasers have been well established as advanced tools in the 21st century, which have the potential to be used to manufacture various materials and obtain anticipated properties. Nowadays, techniques based on lasers, e.g., laser additive manufacturing, laser polishing, laser shock peening, laser quenching, femtosecond laser technologies, etc., are receiving much attention. Notably, laser manufacturing technologies have great potential to be used as tools to more efficiently process present and forthcoming high-performance components, as well as micro- and nano-fabrication in aerospace, aviation, ship and automobile, etc. However, up until now, many questions have remained regarding both theories and processes, and understanding the relationship between lasers and materials remains challenging. Thus, further investigation in this field is necessary and urgent.

The Special Issue scope embraces interdisciplinary work aimed at understanding and deploying the phenomena and mechanisms between lasers and materials, optimizing laser materials processing technology to obtain improved performance, model the microstructural response to lasers, and find the potential applications in the future.

Guest Editor

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About the Journal

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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