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Advances in High-Power Laser Beam and Laser Hybrid Welding

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Deadline for manuscript submissions:
closed (30 November 2020)

Message from the Guest Editors

During the last about ten years there have been tremendous advancements in the field of high-power laser beam- and laser hybrid welding. New lasers are available with powers over 10 kW and even up to 100 kW. Applications come into focus for single-layer and multi-layer laser beam welding of thick plates like in pipelines, wind energy towers, ship building, etc.

Metals is dedicating a Special Issue on the following aspects of high-power laser beam and laser hybrid welding: welding equipment, process control and process monitoring, thick plate welding applications, joint properties, weld quality and qualification, welding defects like hot and cold cracking, and modeling and simulation

Papers on high-power laser beam and laser hybrid welding (e.g., laser-GMAW; laser-SAW, laser-TIG, laser-PAW, etc.) of single- and multi-layer welding are welcome.

Contributions from around the world will contribute to the success of this Special Issue, which aims at spreading the potential of high-power laser beam and laser hybrid welding.

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Message from the Editor-in-Chief

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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