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Modelling of Laser Welding

Guest Editor:

Prof. Dr. Jean-Pierre Bergmann
Department of Production Technology, Technische Universitaet Ilmenau, 98693 Ilmenau, Germany

Deadline for manuscript submissions:
closed (15 April 2021)

Message from the Guest Editor

Dear Colleagues,

The development of new high-intensity laser sources with lower wavelengths presents new challenges and phenomena for the welding pool and key hole, especially for steel and aluminum. High-intensity IR lasers produce a large amount of spatter at high speed before the pre-humping regime, while green lasers exhibit different behaviors during the transition from heat conduction to key-hole welding. This Special Issue will focus on models resulting from experimental investigation as well as modeling and simulation approaches that can help us to understand the melt flow conditions around the key hole and can be used to evaluate key hole dynamics. In addition, papers correlating spatter formation with the manipulation of the melt pool and key hole dynamics are welcome.

Prof. Dr. Jean-Pierre Bergmann
Guest Editor

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Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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