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Advances in Impulse Manufacturing

Guest Editor:

Dr. Taeseon Lee
Department of Mechanical Engineering, Incheon National University, 119 Academy-ro, Yeonsu-gu, Incheon 22012, Republic of Korea

Deadline for manuscript submissions:
closed (31 July 2023)

Message from the Guest Editor

Dear Colleagues,

Metalworking using a high strain rate can benefit many aspects of manufacturing and provide solutions to numerous challenges within the industry. For example, impact welding technologies such as vaporizing foil actuator welding enable the joining of dissimilar materials without significant structural modifications. Electromagnetic forming is another example, not requiring direct contact with the workpiece while extending the forming limits of several materials.

This Special Issue is devoted to addressing the recent development of impulse-based manufacturing technologies such as impact welding, impulse forming, and shock peening by means of explosives, electromagnetic fields, vaporizing foils, and pulsed lasers. Research articles are expected to either report on the state-of-the-art applications of impulse manufacturing or contributing to the understanding of their associated fundamental principles. Original research articles and reviews are welcome, and I look forward to receiving your contributions.

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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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Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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