Special Issue

Impact Welding of Materials

Message from the Guest Editors

The impact welding family encompasses different welding processes, such as explosion welding (EXW), magnetic pulse welding (MPW), vaporizing foil actuator welding (VFAW), laser impact welding (LIW), etc. Although the main operating principle, consisting of a high velocity collision between a flyer and a target is shared by these processes, they differ in the way the flyer is accelerated. These processes also present very different length scales, providing the impact welding family with a broad applicability range. The technical and scientific interest in impact welding is driving the ongoing development of a large number of studies. The present Special Issue will present cutting edge experimental and theoretical research on all aspects of the multidisciplinary field of impact welding. Original research and review papers addressing new developments in similar and/or dissimilar joining by impact welding are valuable scientific contributions to this issue. Topics of interest include (but are not limited to): Process developments; Industrial applications; Metallurgical characterization; Mechanical characterization and fracture analysis; Numerical modelling and simulation

Guest Editors

Prof. Dr. Ivan Galvão

Prof. Dr. Altino Loureiro

Prof. Dr. Ricardo Mendes

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Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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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.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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