



## Explosive Welding and Impact Mechanics of Metal and Alloys

Guest Editors:

**Prof. Dr. Pengwan Chen**

School of Mechatronics  
Engineering, Beijing Institute of  
Technology, Beijing 100081,  
China

**Prof. Dr. Kazuyuki Hokamoto**

Institute of Industrial  
Nanomaterials, Kumamoto  
University, Kumamoto 860-8555,  
Japan

**Prof. Dr. Zoran Ren**

Mechanical Engineering,  
University of Maribor, 2000  
Maribor, Slovenia

Deadline for manuscript  
submissions:

**closed (28 February 2023)**

### Message from the Guest Editors

For the realization of multi-material components, the use of explosive welding is one of the leading candidates for the reliability of bonding strengths at the interface. The technique has a long history; developed and industrialized after WWII, the bonding mechanism is still discussed today due to some uncertain issues at extremely high rates of deformation. Based on the recent progress in high-speed imaging and numerical simulation techniques, the deformation process is being clarified in more detail. Additionally, it is now possible for microstructures to be characterized by advanced equipment which has recently been developed. This Special Issue is proposed to summarize such achievements on explosive welding and other high-rate material processing technologies. The guest editors are welcoming submissions to discuss the microstructure and/or the impact mechanics of various materials at high strain rates.





an Open Access Journal by MDPI

## 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

## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Metals and Alloys)

## Contact Us

Metals Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/metals](http://mdpi.com/journal/metals)  
[metals@mdpi.com](mailto:metals@mdpi.com)  
[X@Metals\\_MDPI](https://twitter.com/X@Metals_MDPI)