



## Advanced Welding Technologies and Additive Manufacturing of Alloy and Metals

Guest Editors:

**Dr. Ting Wang**

State Key Laboratory of  
Advanced Welding and Joining,  
Harbin Institute of Technology at  
Weihai, Weihai, China

**Dr. Ke Han**

School of Materials Science and  
Engineering, Jiangsu University,  
Zhenjiang, China

Deadline for manuscript  
submissions:

**closed (20 January 2024)**

### Message from the Guest Editors

Dear Colleagues,

This Special Issue focuses on the latest research results of welding and the additive manufacturing technology of advanced metal materials, including microstructure, mechanical properties, and the quality control of welding and additive manufacturing based on heat sources such as arc, laser, and electron beam.

The key points are focused on the new strengthening mechanism, the relationship between microstructure and properties, the new microstructure control technologies, process stability, and defect on-line detection methods.

The current Special Issue aims to explore the advanced welding and additive manufacturing of alloy and metals and to study the basic principles of microstructure and property regulations. The articles presented in this Special Issue will address various topics, ranging from, the exploration of advanced welding technologies, microstructure regulation, and the performance improvement of alloy and metals.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

## Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

## 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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

## Contact Us

Materials Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)