# Special Issue

# Advanced Welding Technologies and Additive Manufacturing of Alloys and Metals (2nd Edition)

## Message from the Guest Editors

This Special Issue focuses on the latest results of research on the welding and additive manufacturing technology of advanced metal materials, including the microstructure, mechanical properties, and quality control of welding and additive manufacturing based on heat sources such as arcs, lasers, and electron beams. The key areas of focus are new strengthening mechanisms, the relationship between microstructure and properties, new microstructure control technologies, process stability, and on-line defect detection methods. The current Special Issue aims to explore the advanced welding and additive manufacturing of alloys and metals and study the basic principles of microstructure and property regulation. The articles presented in this Special Issue will address various topics, ranging from the exploration of advanced welding technologies to microstructure regulation and the performance improvement of alloys 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

20 August 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/195047

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

mdpi.com/journal/materials

# Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

# About the Journal

## 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.

## 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

## 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 and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)