# Special Issue

# Metallic Materials Behaviour Under Applied Load

## Message from the Guest Editors

This Special Issue, titlted "Metallic Materials Behaviour Under Applied Load", focuses on how metals respond to external forces. When a load is applied, metallic materials can exhibit different behaviors. Elastic deformation occurs initially, where the material stretches or compresses and then returns to its original shape once the load is removed. However, as the load increases, plastic deformation may take place, resulting in permanent changes in shape. The accommodation mechanisms of plastic deformation (slip, twinning, phase transformations), which are determined by alloy composition and crystal structure, affect the properties of metals and alloys, such as tensile strength, yield strength, and ductility. External factors (for example, temperature and strain rate) also influence how metals respond to the applied loads. Studying this topic is essential for engineering applications to ensure the reliability and safety of structures made of metallic materials.

## Guest Editors


Dr. Zhiping Xiong

School of Materials Science & Engineering, Beijing Institute of Technology, Beijing, China

Prof. Dr. Elena Pereloma

School of Mechanical, Materials, Mechatronic and Biomedical Engineering, University of Wollongong, Wollongong, NSW 2522, Australia


## Deadline for manuscript submissions

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

mdpi.com/journal/metals

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# About the Journal

## Message from the Editor-in-Chief

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.

## Editor-in-Chief

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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