

## Special Issue

# Biodegradable and Biobased Metallic Materials: Design, Processing, Applications

### Message from the Guest Editors

Biodegradable metallic materials have emerged as one of the most promising frontiers in biomaterials science, offering a sustainable alternative to conventional permanent implants.

This Special Issue aims to gather recent advances in the design, processing, and application of next-generation biodegradable and biobased metallic materials, particularly focusing on Mg- and Zn-based systems. Furthermore, special attention will be given to bio-based alloying elements and environmentally friendly processing routes.

Original research articles and comprehensive reviews are welcome. Research areas may include, but are not limited to, the following:

- Design and development of Mg- and Zn-based biodegradable alloys
- Processing routes and microstructure–property relationships
- Morphological control and degradation mechanisms
- Surface coatings, functionalization, and corrosion protection
- Bioactivity, cytocompatibility, and in vitro/in vivo performance
- Eco-friendly and bio-based alloying or processing methods
- Applications in orthopedic, cardiovascular, and tissue engineering devices

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### Guest Editors

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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.

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### Editor-in-Chief

Prof. Dr. Yong Zhang

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