Special Issue

Plastic Forming, Microstructure, and Property Optimization of Metals (2nd Edition)

Message from the Guest Editor

Advanced metals and metallic components play a critical role in modern industries. The development of new metallic materials and novel forming technologies, as well as the optimization of formability and properties, have attracted a lot of interest in the past few decades. As new metals emerge constantly, fundamental knowledge regarding the microstructural evolution mechanism and property control method during material preparation and the forming process are in dire need of significant advances to meet the increasing performance requirements of high-end components. This Special Issue aims to publish papers that focus on microstructural and property optimization in the preparation and plastic forming of aluminum alloys, titanium alloys, magnesium alloys, superalloys, high-entropy alloys, and their composites. The development of a novel plastic forming process is also welcomed. Innovations in physical-based and data-driven methods for modeling and optimizing the forming process, microstructure, and properties are strongly encouraged.

Guest Editor

Dr. Xuefeng Tang

Associate Professor, School of Materials Science and Engineering, Huazhong University of Science and Technology, Wuhan 430074, China

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closed (20 August 2024)

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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 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.

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

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