



Mechanical Properties of Advanced Metallic Materials

Guest Editors:

Prof. Dr. Yang Zhang

Key Laboratory of Superlight
Materials and Surface
Technology, Ministry of
Education, College of Materials
Science and Chemical
Engineering, Harbin Engineering
University, Harbin 150001, China

Prof. Dr. Yuqiang Chen

School of Materials Science and
Engineering, Hunan University of
Science and Technology,
Xiangtan 411201, China

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Message from the Guest Editors

With many of today's emerging technologies, the primary emphasis is on the mechanical properties of the metallic materials used in the fields of ocean, air and aerospace, bridge and nuclear engineering. Strength is the main indicator of the mechanical property. Different strengthening mechanisms, such as phase transformation strengthening, solid-solution strengthening, dislocation strengthening, grain-boundary strengthening, precipitation strengthening, and load transfer via the introduction of strong phases, can be used to achieve high strength/hardness. These strengthening methods accompany with various deformation mechanism, such as Transformation Induced Plasticity (TRIP) and Twinning Induced Plasticity (TWIP) et al.

This Special Issue will bring together high-quality research and review articles on preparation, microstructure, mechanical properties, and diverse applications of metallic materials. Potential topics include, but are not limited to:

Alloy design and preparation of metallic materials;
Microstructure characterization and mechanical properties of steel, high entropy alloy, aluminum alloy et al.;
EBSD, TEM and APT;
Strengthening and deformation mechanisms.





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Editor-in-Chief

Prof. Dr. Alessandra Toncelli

Department of Physics, University
of Pisa, 56126 Pisa, PI, Italy

Message from the Editor-in-Chief

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Crystals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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