Special Issue

Light Metals and Their Composites

Message from the Guest Editor

Light alloys and metal composites with a matrix of aluminum, magnesium, titanium, and other metals, which are currently being developed, have enhanced mechanical and physical properties. The main studies in this field are focused on the introduction of small amounts of some fibers and micro- and nanoparticles (additionals), which can significantly improve the properties of the metal matrix. However, there is a difficulty in the uniform distribution of fibers and particles in the metal matrix. To solve this problem, it is possible to use various approaches in the preparation of additionals, including the obtaining of master alloys and the use of original compositions for the in situ synthesis of hardeners in the metal matrix, as well as the treatment of melts with particles by external actions, including vibration, ultrasonic treatment, etc. This Special Issue covers all areas of obtaining and research of physical, mechanical, and functional properties of light alloys and metal composites, including those reinforced with particles and fibers. Articles describing other directions in the field of obtaining and research of light alloys are also welcome.

Guest Editor

Prof. Dr. Alexander Vorozhtsov

Laboratory of High Energetic and Special Materials, Tomsk State University, Tomsk, Russia

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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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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.

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Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

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