Special Issue

Ceramic Reinforced Metal Matrix Nanocomposites

Message from the Guest Editor

Nanoparticle reinforced metal matrix composites provide high strength and can be used to produce lightweight components. Even small amounts of nanoparticles can improve the properties of the matrix metal in a remarkable way by means of Hall-Petch or Orowan strengthening. Nevertheless, the most accurate requirements for the choices of suitable matrix, reinforcement, and techniques (processing and postprocessing) are not completely defined. It is very interesting to deeply investigate the connection between the features, constituents, including the matrix, reinforcement, interphases, and also production techniques. The aim of this Special Issue is to cover the recent progress and new developments regarding all aspects of ceramic-reinforced metal matrix nanocomposites. Original articles and review papers will deal with the following themes:

- processing and characterization of any type of ceramics and matrix metals
- microstructural evaluation and physical and structural characterization
- optimization of properties and processes including calculations
- simulation of properties over length-scales
- novel applications of ceramic-reinforced metal matrix nanocomposites

Guest Editor

Prof. Dr. Wonhee Lee

Department of Nanotechnology and Advanced Materials Engineering, Sejong University, Seoul 05006, Republic of Korea

Deadline for manuscript submissions

closed (31 August 2022)



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/39078

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

mdpi.com/journal/ metals





Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Metals and Alloys)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

