Special Issue

Shape Memory Alloys: Material, Structure, Modeling and Application

Message from the Guest Editors

In the past several decades, shape memory alloys (SMAs) have been at the forefront of material research. Owing to their excellent super-elasticity and shape memory effects resulting from their solid–solid thermo-elastic martensite transformation as well as their strong biological compatibility, SMAs have been used for a wide variety of applications in various fields, such as biomedicine, microelectromechanical systems, aerospace, civil engineering, etc. Currently, the most important problems with SMAs include (1) how to improve the basic thermo-mechanical properties of the material; (2) how to understand the underlying physical mechanism of super-elasticity and the shape memory effect; (3) how to develop theoretical models in different spatial and time scales; and (4) how to design SMA-based devices and structures for use in engineering applications. This Special Issue, titled “Shape memory alloys: material, structure, modeling and application”, will focus on the preparation, characterization, modeling, and application for SMAs and their structures. We invite the submission of research articles, communications, and reviews on these topics.

Guest Editors

Prof. Dr. Qianhua Kan

School of Mechanics and Aerospace Engineering, Southwest Jiaotong University, Chengdu 610031, China

Dr. Chao Yu

School of Mechanics and Aerospace Engineering, Southwest Jiaotong University, Chengdu 610031, China

Deadline for manuscript submissions

closed (20 May 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/138410

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

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)