metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.9

CITESCORE 4.4

Finite Element Simulation of Mechanical Properties for Metallic Materials

Guest Editors:

Prof. Dr. Miroslav Zivkovic

Dr. Vladimir Dunić

Prof. Dr. Nenad Gubeljak

Dr. Nenad Djordjevic

Deadline for manuscript submissions:
30 July 2024

Message from the Guest Editors

Determining the mechanical properties of metals is one of the main challenges in finite element simulations. Correct material parameters and constitutive models capable of capturing the physical behavior of materials are two essential components for predictive finite element simulations. Furthermore, the predictive modeling of a range of metals undergoing inelastic deformation typically requires a number of advanced hardening and damage functions that lead to validated simulation results. In addition, computational mechanics may include new techniques and approaches, such as phase-field modeling, which can predict the degradation of material parameters due to damage occurrence. The development of such techniques will provide a new feature in the investigation of metallic structures. An assessment of the balance of (reversible) strain energy and dissipated energy in the material can improve the simulation quality of the material undergoing cyclic loading.

metals

IMPACT FACTOR 2.9

CITESCORE 4.4

an Open Access Journal by MDPI

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

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.

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), Inspec, CAPlus / SciFinder, and other databases.
Journal Rank: JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

Contact Us

Metals Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/metals
metals@mdpi.com
𝕏@Metals_MDPI