

## Special Issue

# Advances in Creep of Metals and Alloys

### Message from the Guest Editors

In the last decades of the 20th century, some important advances were gained in the understanding of the steady-state creep of metallic materials. However, we are still far from a complete description of the creep of metals and alloys.

In a continuous effort, the scientific community is looking for new approaches to the problem and is seeking to increase the number of tools dedicated to definitively describing the creep behavior of metallic materials. These include the statistical and stochastic treatment of data, the use of simulation and modelling tools (e.g., molecular dynamics, crystal plasticity models, and discrete dislocation dynamics), the application of heuristic and probabilistic optimization, the use of nanoindentation techniques at high temperature, in-situ testing, and new descriptions of materials' microstructures as fractals.

For this Special Issue, we welcome the submission of original research articles, communications, and reviews on recent advances in the creep of metals and alloys, with a special interest in the assessment of models and their application to real components.

---

### Guest Editors

Dr. Ricardo Fernández Serrano

Spanish National Research Council, CSIC, National Centre for Metallurgical Research, Madrid, Spain

Dr. Qiang Xu

Department of Technology and Engineering, The University of Huddersfield, Huddersfield HD13DH, UK

---

### Deadline for manuscript submissions

closed (30 April 2022)



## Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 6.4  
Indexed in PubMed



[mdpi.com/si/46082](https://mdpi.com/si/46082)

*Materials*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[materials@mdpi.com](mailto:materials@mdpi.com)

[mdpi.com/journal/  
materials](https://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](https://mdpi.com/journal/materials)



## About the Journal

### Message from the Editorial Board

*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.

---

### Editors-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

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

---

### 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)