



Phase Transformation Theory and Microstructure Simulation of Alloys

Guest Editor:

Dr. Ang Zhang

College of Materials Science and
Engineering, Chongqing
University, Chongqing, China

Deadline for manuscript
submissions:

closed (20 October 2023)

Message from the Guest Editor

Phase transformations occur in a large variety of alloys subjected to a change in temperature or pressure. The development of phase transformation theory is directly related to a continuous progress in microstructure simulation techniques, which benefits the better establishment of microstructure–processing–properties relationships. The successful identification of multiphase microstructure and thermodynamic evolution requires the promotion and application of phase transformation theory and simulation techniques, which enriches the design, optimization, and operation of alloys and lays the foundation for material discovery.

This Special Issue aims to cover recent progress and new developments in the phase transformation theory and microstructure simulation of alloys. All aspects related to phase transformation (e.g., solidification, heat treatment, and thermomechanical processing), physical and numerical simulation, and related structural characterization are covered. Review articles which describe the current state of the art are also welcomed.





an Open Access Journal by MDPI

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

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.

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

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)