Special Issue

Processing, Microstructure and Property Relationships in Advanced Manufacturing of Alloys

Message from the Guest Editor

In the hot forming process, materials often undergo a series of plastic deformation. The hot forming parameters, including strain rate, strain, and deformation temperature, greatly impact the hot deformation behavior and deformation mechanisms of alloys. Meanwhile, complex microstructure evolution is induced, which greatly affects the properties of components. In order to further optimize the microstructures and properties, heat treatment of the hot formed components is a necessary procedure. Thus, it is of great importance to investigate the processing–microstructure–property relationships in advanced manufacturing of alloys.

It is my pleasure to invite you to submit research articles and review papers to this Special Issue on advanced forming technologies and heat treatments of aluminum alloys, nickel-based superalloys, titanium alloys, and magnesium alloys as well as their components. I believe that this Special Issue can inspire many scientists who have been pursuing greater understanding of the processing–microstructure–property relationships in the advanced manufacturing of alloys.

Guest Editor

Prof. Dr. Yong-Cheng Lin

School of Mechanical and Electrical Engineering, Central South University, Changsha 410083, China

Deadline for manuscript submissions

closed (28 February 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/75940

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)