Special Issue

Advances in Metallurgy Technologies: Materials Preparation and Metal Recycling

Message from the Guest Editor

With the continuous advancement of global industrialization, the demand for metallic materials has been steadily increasing. However, the extraction of high-quality mineral resources is becoming increasingly difficult and costly, while the environmental pressures caused by mining activities are growing more severe. Against this backdrop, innovations in metallurgy have become particularly important. On the one hand, advanced material preparation technologies can enhance the performance of and optimize the microstructure of metals, thereby meeting the stringent requirements of high-end sectors such as aerospace, renewable energy, and electronics manufacturing. On the other hand, efficient metal recycling and reuse technologies can not only reduce dependence on primary mineral resources but also significantly lower energy consumption and carbon emissions, contributing to sustainable development goals. Therefore, exploring and promoting advancements in metallurgy—specifically in material preparation and metal recycling—is necessary to addressing multiple challenges, including resource depletion, environmental pollution, and industrial upgrading.

Guest Editor

Dr. Wenhua Xu

Zhongyuan Critical Metals Laboratory, Zhengzhou University, Zhengzhou 450001, China

Deadline for manuscript submissions

20 May 2026

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/253596

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)