Special Issue

Advances in Metallic Alloys, Materials and High-Performance Additive Manufacturing: Challenges and Opportunities

Message from the Guest Editors

The past decade has witnessed a revolutionary advancement in metal additive manufacturing (AM), transforming the landscape of component design and production across diverse industries. This rapid evolution, driven by the development of novel alloys specifically tailored for AM and increasingly accessible processing technologies, presents unprecedented opportunities to create components with enhanced properties and complex geometries previously unattainable. The international scientific community is now intensely focused on a comprehensive understanding and optimization of the entire AM value chain, from fundamental materials science to final component performance. This Special Issue aims at delving into the intricate interplay between innovative material systems, advanced processing methodologies, characterization, and critical post-manufacturing steps that collectively lead to superior performance in additively manufactured metallic components and applications. We encourage submissions that present a holistic perspective on pushing the boundaries of what is achievable with metal AM.

Guest Editors

Dr. Patricia C. Zambrano-Robledo

Dr. Hector R. Siller

Dr. Leopoldo Ruiz-Huerta

Deadline for manuscript submissions

20 February 2026

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/246426

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)