Special Issue

Automation and Advanced Materials for Resilient Construction

Message from the Guest Editor

The rapid evolution of construction technologies is revolutionizing the way we design, build, and maintain infrastructure. This Special Issue on “Automation and Advanced Materials for Resilient Construction” delves into the cutting-edge innovations that will shape the future of the built environment. Key themes of this Special Issue include the following: **Robotic construction**: Transforming the industry with precise, scalable, and cost-effective processes like autonomous bricklaying and 3D concrete printing. **Remote sensing technologies**: Enabling the real-time assessment of structural integrity to ensure safety and longevity. **Artificial intelligence (AI)**: Optimizing workflows, predicting material performance, and enhancing decision making in construction. **Advanced materials**: Focusing on in situ resources to develop resilient and sustainable construction materials with advanced functions such as self-healing, internal curing, adaptability, energy efficiency, thermal insulation, and printability, which are key elements for enhancing sustainability and durability in construction.

Guest Editor

Dr. Nima Farzadnia

Department of Civil, Geological, and Environmental Engineering, University of Alaska Fairbanks, Fairbanks, AK, USA

Deadline for manuscript submissions

closed (20 April 2025)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/216918

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

MDPI

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)