

Special Issue

Design and Properties of 3D Printing Concrete

Message from the Guest Editor

Concrete 3D printing has received a lot of interest in recent years, leading to the development of new concepts, printing devices and construction designs. The disruptive development of 3D printing in the building field has induced multidisciplinary research development, leading to new mixed designs of printable materials, the definition of fresh state properties and rheological behaviour requirements, structural and architectural designs of printed structures using topology optimization, and robotics innovation. This Special Issue focuses on works related to those innovations. Paper topics can include many aspects related to the digital fabrication of concrete and cement-based materials: processing, case studies, fresh state properties and rheological requirements, the mechanical behaviour of printed cement-based material, the structural design of printed parts and structures, and environmental and economic impacts. This Special Issue is expected to provide a collection of articles showing an overview of recent advances in the field of concrete 3D printing and drawing future perspectives for these new revolutionary methods.

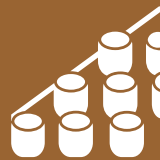
Guest Editor

Dr. Arnaud Perrot

IRD, Université Bretagne Sud, Lorient, France

Deadline for manuscript submissions

closed (20 February 2025)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

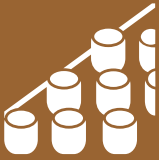


mdpi.com/si/144408

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

[mdpi.com/journal/
materials](https://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](https://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)