Special Issue

Material Characterization, Design and Modeling of Asphalt Pavements

Message from the Guest Editors

Asphalt mixture is the most commonly used material for road pavement. A thorough understanding of its material properties, behavior under various conditions, and the impact of design choices on its longevity is essential for optimizing pavement performance and lifecycle cost. By exploring the interplay between material science and pavement engineering, this Special Issue will consolidate innovative research and advancements in the material characterization, design methodologies, and predictive modeling of asphalt pavements. The scope includes novel material characterization techniques, the influence of additives and modifiers on pavement performance, innovative sustainable design practices, and computational modeling applications to predict asphalt mixes and pavement behavior under various conditions. Article types may range from original research papers and review articles to case studies and technical notes. This Special Issue is designed to bring together cutting-edge developments in civil engineering materials and their applications, aligning with the journal's focus on advancing transportation infrastructure. We look forward to receiving your contributions.

Guest Editors

Prof. Dr. Weidong Cao

Dr. Jizhe Zhang

Prof. Dr. Dedong Guo

Dr. Wengang Zhang

Deadline for manuscript submissions

20 October 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/228841

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)