



Advances in Alternative Asphalt and Pavement Materials: Design, Structure and Properties

Guest Editors:

Dr. Chiara Riccardi

Department of Civil and
Industrial Engineering (DICI),
School of Engineering, University
of Pisa, Pisa, Italy

**Dr. Augusto Cannone
Falchetto**

Department of Civil Engineering,
Aalto University, 02150 Espoo,
Finland

Deadline for manuscript
submissions:

10 August 2024

Message from the Guest Editors

Dear Colleagues,

Nowadays, the need to improve the environmental sustainability of asphalt pavement has promoted a more inclusive concept of alternative paving materials and technologies for road applications. This family of solutions includes paving components such as binders (bio-binders, biomaterials, bio-oils, etc.), aggregates (construction and demolition wastes, reclaimed asphalt pavement, steel slags, artificial aggregates, plastics, etc.) and additives (asphalt recycling agent, rubber, plastic, fibers, recycled polymers, waxes, anti-stripping agents, etc.). Combining alternative paving materials with technologies such as warm, cold and foam mixing can enhance their sustainability benefits by reducing energy demand and emissions.

Alternative paving materials demand a novel approach to natively incorporate these materials into the design of paving composites to ensure their high performance and durability. For these new materials, the evaluation of the structure and microstructure of the mixture to understand its properties and behavior is crucial. At the same time, defining how the mix design can be integrated into the pavement design is essential.





an Open Access Journal by MDPI

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

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.

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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)