Special Issue

Construction Materials: Innovations in Recyclable, Low-Carbon, and Durable Solutions

Message from the Guest Editors

As global construction activity intensifies, the need for sustainable, high-performance alternatives becomes increasingly critical. This Special Issue, “Construction Materials: Innovations in Recyclable, Low-Carbon, and Durable Solutions”, explores the latest advancements in materials science and engineering to address these challenges. This Special Issue focuses on emerging materials including low-carbon concrete, reclaimed asphalt, recycled aggregates and geopolymers, which offer promising alternatives to conventional materials. Furthermore, it examines innovative manufacturing processes, including 3D printing and prefabrication, that can enhance efficiency and reduce waste. The exploration of lifecycle assessments of these materials will provide a comprehensive understanding of their environmental and economic benefits. This Special Issue will also delve into the implementation of circular economy principles in construction, promoting strategies for material reuse, repurposing, and recycling to minimize waste and maximize resource efficiency.

Guest Editors

Prof. Dr. Hang Lin

School of Resources and Safety Engineering, Central South University, Changsha 410083, China

Dr. Fenghua Nie

School of Resources and Safety Engineering, Central South University, Changsha 410083, China

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

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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

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