

Tentative Outline

Special/Thematic Issue for The Open Construction & Building Technology Journal

Innovative Construction Materials to Build a Better Infrastructure

Guest Editor: Dr. Ramadhansyah Putra Jaya

Scope of the Thematic Issue:

Introduction:

The evolution of construction materials has emerged as a cornerstone in the endeavor to establish a more resilient and efficient infrastructure. These innovative materials, engineered with cutting-edge technology and sustainable practices, are redefining the way we construct our built environment. By addressing challenges such as durability, environmental impact, and resource efficiency, these materials are playing a pivotal role in constructing a better, more sustainable future. Innovative construction materials are also key contributors to the development of resilient urban landscapes capable of withstanding the challenges posed by climate change and natural disasters. Thus, this special issue (SI) is dedicated to the exploration of diverse research aspects concerning construction materials and technology, delving into the interplay between their properties, applications, and environmental implications. This thematic issue seeks to curate a vital compendium focused on sustainable construction materials, catering to the needs of practicing engineers, designers, researchers, and other professionals vested in the entirety of construction and building technology. In addition, contributions on related topics, including theoretical and numerical modeling of construction and building technology are welcome.

The aims and scope:

This special issue aims to collate original research and review articles that report on the newest exploration on innovative construction materials to build a better infrastructure with covering of aspects including cement & concrete, recycled materials and by-products, structural engineering and materials, construction and material, 3-D printing and additive construction, composites for construction and pavement engineering. The articles from industry and academia can begin to apply, as well as papers on good practices that others can learn from and utilize. Furthermore, discussions/research/case study on any normative restrictions, implementation in codes and Standards in regard to its application and challenges are most welcome.

Keywords: Cement & concrete; Recycled materials; Structural engineering; Construction; Infrastructure; Composites; Pavement engineering; Polymers.

Sub-topics:

- Scientific developments in construction and building materials
- Testing of materials using advanced methods and techniques
- Building information modeling
- Cement, concrete reinforcement, bricks, and mortars
- Asphalt, pavements and polymer materials
- Fundamental, theoretical, modelling and experimental studies of materials
- High-rise building design and construction
- Chemical, microstructural and structural characterization of the cementitious materials
- Innovative building materials
- Structural analysis, assessment, design, and testing

Schedule

- Complete Thematic issue submission deadline: **31 December 2023**

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