

Special Issue

Materials Engineering in Construction

Message from the Guest Editors

The extensive use of cement in building construction activities consumes a large amount of natural resources, and the resulting high carbon footprint has always been a concern. Due to the continuous advancement in construction technology, the requirements for construction materials have gradually increased, and concrete materials need to meet not only basic mechanical properties, but also higher requirements for durability and time-varying properties. This means that low-carbon concrete needs to maintain reliable performance over time, but the confirmation of time-varying properties consumes high time costs, which provides resistance to its promotion, so it is necessary to summarize the development pattern of this type of performance and give an explanation. Considering the future sustainability of the construction industry, this Special Issue aims to bring together innovative research results on low-carbon concrete, which will provide some guidance for the practical application of green building materials. The directions covered in this Special Issue include (but are not limited to) New green building materials; Carbon footprint of materials; Long-term performance research

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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

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