



Eco-Friendly Building Materials

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Message from the Guest Editors

This Special Issue opens up the possibility for scientists and engineers to share their findings and views on eco-friendly building materials and low-carbon building materials. We invite researchers to share their findings on incorporating industrial, agricultural, and mining waste in building materials for structural purposes or otherwise, developing materials with lower CO₂ emissions, such as LC3 cement and alkali-activated materials, and construction artifacts with the incorporation of waste. Research on the use of mining waste, steel industry waste, biomass thermoelectric waste, construction and demolition waste in Portland cement, activated cement, mortars, and concrete is welcome.

Topics of interest include, but are not limited to, the following:

- Incorporation of industrial, agricultural, and mining waste in construction materials;
- Green cement and low-carbon binders;
- Low-carbon concrete;
- Use of residues as precursors in alkali-activated materials;
- Construction and demolition waste as binders;
- Concrete artifacts incorporating waste;
- Waste immobilization in cementitious materials;
- Decarbonization via cement, mortar, and concrete.





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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.

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