Special Issue

Advanced Studies in Cement-Based Materials

Message from the Guest Editor

The construction industry is undergoing a transformative shift driven by advancements in material science, digital fabrication, and sustainability. This Special Issue explores cutting-edge research on novel cement-based materials and technologies that enhance efficiency, durability, and environmental responsibility in construction. In this context, this Special Issue is focused on but not limited to the following topics:

- Advanced materials for digital construction and 3D printing;
- Nanotechnology applied to cement-based materials;
- Novel alternative binders;
- Usage of residues in efficient construction materials;
- Cement-based intelligent construction materials;
- Cement-based materials for thermal efficiency.

Guest Editor

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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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