Special Issue

Sustainable Development of Concrete Materials and Related Building Materials

Message from the Guest Editors

The aim of this Special Issue is to identify the latest research in the development of sustainable materials in concrete and cement for sustainable infrastructure. Innovations such as alternative binders, recycled materials, and carbon capture technologies reduce environmental impacts. Advancements in self-healing concrete and durability optimization enhance infrastructure resilience to climate change and natural disasters. These efforts align construction practices with global sustainability goals, promoting eco-friendly, durable, and adaptable infrastructure solutions. Topics may include, but are not limited to:

- Low-carbon construction materials and structures;
- Sustainable pavement engineering;
- Three-dimensionally printed concrete;
- Engineered cementitious composites (ECC);
- Alkali-activated materials;
- Ultra-high performance concrete;
- Geopolymer materials;
- Unfired bricks;
- Recycled aggregate concrete;
- Eco-friendly concrete technology;
- CO2 capture.

For further reading, please follow the link to the Special Issue Website at:
https://www.mdpi.com/journal/buildings/special_issues/68VT5TC516

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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.

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