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Development in Low-Carbon, High-Performance Concrete Technology

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Message from the Guest Editors

Dear Colleagues,

High-performance concrete is one of the indispensable materials in modern urban construction. Its quality is directly related to the quality of construction projects and is the fundamental guarantee for ensuring the quality of projects. In addition, low carbon and environmental protection have become new requirements for the concrete industry in modern society. This Special Issue aims to deeply explore the performance change mechanism of building materials, stimulate innovation, promote the development of low-carbon concrete technology and promote the sustainable development of the construction industry. The topics for this Special Issue include (but are not limited to) the following:

- Low-carbon concrete;
- High-performance concrete;
- Sustainable building materials;
- Mineral admixtures;
- Industrial waste and by-products;
- Alternative cementitious materials;
- Solid waste-recycled concrete;
- Carbonation;
- Carbon dioxide capture, utilization and storage;
- Life cycle sustainability.

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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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