



Research on Concrete and Cement-Based Materials

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Message from the Guest Editors

The most universal and today most widely used construction materials are cement-based materials, in particular concrete. Ongoing research into the development of new generation concretes and the study of their properties is essential for their application in civil engineering. The implementation of the newest technologies is necessary for construction businesses to succeed in the industry and remain competitive in the global market. Durability, eco-efficiency and compliance with the investor's financial demands are the basic requirements for modern construction.

The aim of this Special Issue is to provide a platform to discover state-of-the-art knowledge, practical application, and cutting-edge developments in the area of structural behavior and properties of concrete and cement-based materials. We are pleased to invite you to present your research and development outcomes in the form of research articles, reviews or case studies in the following areas:

- High-performance concretes;
- Self-compacting concretes
- Eco-friendly cement-based materials;
- Self-healing concretes;
- Polymer or geopolymers concretes;
- Fiber-reinforced concrete or biocomposites;
- Soil-cement materials;





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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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