Special Issue

Advanced Research in Cement and Concrete

Message from the Guest Editors

The development of the building systems that sustain our living spaces and societal economy requires the extensive utilization of various construction materials. Current building structures demand innovation, sustainability, energy efficiency, and resilience, necessitating a new breed of construction materials that possess excellent qualities, including long durability, environmental friendliness, tailored functionality, and esthetic appeal. Therefore, this Special Issue aims to compile a comprehensive array of research papers focusing on the development of advanced cement and concrete materials, which may drive construction materials to a higher level. The scope covers but is not limited to, experimental and theoretical aspects of cement hydration and durability, design and fabrication of low- and negative-carbon concrete, ultra-high-performance concrete, fiber-reinforced cementitious composites, and fiber-reinforced polymer composites, chemical, microstructural, and structural characterization, advanced theoretical models and numerical techniques, and applications of the cement and concrete.

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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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