Special Issue

Sustainable Concrete: Research on Waste Utilization and Performance Optimization

Message from the Guest Editors

Research in the last decade has focused on sustainability and the creation of a circular economy. The construction industry uses natural resources to produce construction products, and one important area of Mresearch is the reduction in the use of natural resources by employing waste materials in construction products. Concrete plays a key role in the construction industry and contributes to the increase in carbon dioxide emissions, and thus we should develop materials that will reduce these emissions and save natural resources. The Special Issue "Sustainable Concrete: Research on Waste Utilization and Performance Optimization" focuses on research into sustainable concrete. This product is manufactured using redundant waste materials that would otherwise end up in landfills. This concrete must not only be sustainable but must also meet all the basic performance properties and be mechanically durable. Sustainable and environmentally efficient concrete, made from sustainable binders, also falls within the scope of this Special Issue, as does the study of its properties and their improvement.

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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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