Special Issue

Advancements in Concrete Materials for Sustainable Construction

Message from the Guest Editor

This Special Issue is dedicated to reviewing the recent progress on SCC(Self-Compacting Concrete). UHPC(Ultra-High Performance Concrete), UHPFRC(Ultra-High Performance Fiber Reinforcement Concrete), and other novel materials with the aim of tackling, in particular, the most critical problems related to durability, strength, and sustainability while renewing construction standards. SCC has been characterized by its very good flowability without mechanical vibration; more recent developments include the inclusion of recycled aggregate, industrial by-products. and nano-additions with enhanced performance and ecological friendliness. While UHPC reaches outstanding compressive strength and durability, other binder alternatives are introduced, such as alkaliactivated materials, with the aim of reduction in CO2 emissions.UHPFRC, by using state-of-the-art developments of sustainable fibers and optimized mixes, combines unexcelled tensile strength and crack resistance.

This SI is concerned with such transformative technologies that enable sustainable construction to be in harmony with environmental needs and contribute toward a resilient, eco-conscious built environment.

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I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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