



Concrete Characteristics and Experimental Research in Civil Engineering on Low-Carbon Concrete

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Message from the Guest Editors

The global production of concrete persists at the highest level in decades. The production of cement and concrete is known for its high energy consumption and high emissions, which contributes to approximately 8% of global CO₂ emissions. Furthermore, the natural resources used in concrete manufacturing are becoming scarce. Therefore, the development of sustainable and low-carbon concrete is essential and has become one of the main topics for both researchers and industry. Advanced technology capable of producing clinker-free cementitious materials, such as alkali-activated materials, as well as the incorporation of high-volume industrial wastes and building demolition, e.g., recycled sands and aggregates into concrete have been attracting more and more attention recently.

This Special Issue seeks high-quality works focusing on new approaches and technologies of low-carbon concrete production, new techniques for concrete characterization, the use of potential industrial or construction solid wastes in concrete, experimental research on the structure and engineering properties of concrete, advanced strategies in the recycle, and reuse of construction waste, etc.





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