Special Issue

Carbon Negative Cement: Pioneering the Use of Alternative Materials and Waste for Sustainable Circular Construction

Message from the Guest Editors

Concrete is the most widely used construction material, playing a crucial role in nearly every modern building and infrastructure project. Despite its utility, concrete production has a significant environmental impact, particularly due to the cement that it contains. Cement production is responsible for approximately 9% of global CO2 emissions. Given this substantial environmental cost, there is increasing interest in developing sustainable alternatives to traditional concrete, including carbon-negative concrete. Carbon-negative concrete has the potential to offset more CO2 emissions than it generates, making it a powerful tool in combating climate change. Many carbon-negative concretes incorporate carbon capture, utilization, and storage (CCUS) technologies into their manufacturing process.

The topics to be covered in this Special Issue include, but are not limited to, concrete from industrial mineral waste (i.e., fly ash, mining and tailing waste, blast furnace slag, etc.), biochar applications in construction, waste glass as a construction material, geopolymers, contaminant leaching, recycled concrete aggregate utilization, life-cycle assessments, and techno-economic analysis.

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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. *Sustainability* publishes original research articles, review 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.

Editor-in-Chief

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