

Special Issue

Enhancing Concrete Sustainability: Innovative Materials and Technologies for Greener Concrete

Message from the Guest Editor

Concrete is the most widely used building material worldwide and it has become integral to modern life because it is generally a durable and cost-effective; however, a major challenge is that its production is linked to adverse environmental impacts, including the use of non-renewable natural materials, when it comes to Portland cement, the high CO₂ emissions and energy usage of the cement production process. As concrete demand is projected to increase, it is important to investigate ways of building with concrete more sustainably, including utilising innovative approaches and technology. In this context, intensive international research has focused on innovations that address the environmental impact and overall sustainability of concrete. Extensive studies have focused on investigating opportunities and initiatives to reach carbon neutrality, to design innovative eco-friendly materials, to promote reuse and recycling, and to incorporate circular economy concepts, starting at the cement production plant and extending through the entire life cycle of the concrete structure.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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