Special Issue

Design of Green-Engineered Cementitious Composites for Improved Sustainability

Message from the Guest Editor

Concrete is the material most used in construction. In all phases of the life cycle of concrete, from acquiring raw materials, through production and use, to final development, there is a supply and high energy consumption. Therefore, waste management strategies such as reduction, reuse, recycling and renewable have been developed. Using inorganic industrial residues, waste aggregates from demolition, components from renewable raw materials and alternative cement binders when producing concrete has led to sustainable concrete design and a greener environment. However, compared to natural materials, these composites show a loss of mechanical properties and reduced durability with a relatively low waste material replacement rate. Therefore, we need to intensify work on the invention of green concrete composites that can outperform traditional concrete. When achieving this, it is necessary to conduct further research on them and disseminate the results, particularly in terms of their durability and long-term effects.

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Deadline for manuscript submissions

closed (20 June 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/171376

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