



*Special Issue Reprint*

## Innovative Solutions for Concrete Applications

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The Special Issue “Innovative Solutions for Concrete Applications” presents recent developments in the field of concrete technology and its applications. The articles and state-of-the-art reviews highlight the key themes such as sustainability, performance, durability, cost, environmental impact, recycling, and construction waste management. It also explores emerging techniques and innovations, including alkali-activated concrete, bacterial concrete, crumb rubber concrete, foamed concrete, waste-based concrete composites, and the reuse of construction and demolition waste. Sustainable concrete alternatives, innovative materials, and improved recycling and mixing techniques offer significant opportunities to reduce the environmental impact of concrete. However, challenges related to cost, long-term durability, and the application of life cycle assessment and life cycle cost analysis still need to be addressed through ongoing research. Furthermore, technologies such as three-dimensional concrete printing present advanced opportunities for innovation in the construction industry.



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