Special Issue

Utilization of Recycled Aggregates and Waste in Sustainable Concrete Materials

Message from the Guest Editors

The construction industry increasingly embraces sustainability as a core principle, addressing urgent challenges such as resource depletion, waste accumulation, and carbon emissions. This Special Issue, titled "Utilization of Recycled Aggregates and Waste in Sustainable Concrete Materials", highlights innovative applications of recycled aggregates and various waste materials to develop sustainable concrete for diverse purposes. By promoting these materials, the issue contributes to advancing the circular economy, reducing the ecological footprint of construction activities, and fostering environmentally conscious building practices. We invite original research, reviews, and case studies exploring various aspects of sustainable concrete, including but not limited to its mechanical, durability, structural, and microstructural properties. This issue will also examine the application of these materials in civil engineering structures, architectural designs, pavement systems, and other infrastructural projects. Furthermore, it aims to cover advancements in material processing, waste management, environmental assessment techniques, and their economic implications.

Guest Editors

Dr. Arvindan Sivasuriyan

Institute of Civil Engineering, Warsaw University of Life Sciences—SGGW, Nowoursynowska 159 St, 02-776 Warsaw, Poland

Prof. Dr. Eugeniusz Koda

Institute of Civil Engineering, Warsaw University of Life Sciences—SGGW, Nowoursynowska 159 St, 02-776 Warsaw, Poland

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Buildings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
buildings@mdpi.com

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Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

Prof. Dr. David Arditi
Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

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