



Life Cycle Assessment for Enabling Circular Economy Transition in Buildings and Construction

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Message from the Guest Editors

Dear Colleagues,

Circular Economy (CE) has emerged as a new paradigm in the building and construction industry that can help reduce the demand for new resources and eliminate untreated waste at end of life by promoting the closed-loop philosophy through reuse and recycling, thus reducing the overall environmental footprints of buildings. In order to implement CE in construction, various solutions in the form of reusable/recycled materials, innovative building components, design strategies (deconstruction, disassembly, adaptability, etc.), business models, and assessment tools have been proposed. This Special Issue aims to explore the potential of LCA in enabling CE-based operations in the building and construction industry.

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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.

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