

Special Issue

Circular and Nature-Based Materials for Net-Zero Cities: Integrating Green Infrastructure and Urban Sustainability

Message from the Guest Editors

This Special Issue, “Circular and Nature-Based Materials for Net-Zero Cities: Integrating Green Infrastructure and Urban Sustainability”, is dedicated to integrating circular economy principles with green infrastructure as a strategy that can accelerate the transition toward zero-carbon cities. The focus is on innovative, low-carbon materials and design approaches that significantly reduce both embodied and operational emissions. The thematic scope includes bio-based resources (such as moon wood, hemp–lime composites, and mycelium-based materials), mineral and volcanic resources with low processing energy (e.g., expanded perlite or pumice), and waste-derived construction materials, including fly-ash concrete, recycled aggregate concrete, geopolymer binders, and industrial by-product composites. It also covers the reuse and repurposing of existing structures, as well as local and recycled resource flows, and design for longevity, modularity, and disassembly. The aim of this Special Issue is to present practical methods for creating resilient, regenerative, and circular urban environments through material innovation and low-carbon design.

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Editor-in-Chief

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