Special Issue

Green and Low-Carbon Comprehensive Utilization of Solid Waste Resources

Message from the Guest Editors

The global transition toward sustainability demands urgent innovation in managing solid waste, a critical challenge exacerbated by rapid industrialization, urbanization, and resource-intensive practices. Traditional waste disposal methods contribute significantly to environmental pollution, greenhouse gas emissions, and resource depletion. To align with circular economy principles and climate goals, there is a pressing need to develop technologies and strategies that transform solid waste into valuable resources through green and low-carbon pathways. This Special Issue of *Buildings* focuses on "Green and Low-Carbon Comprehensive Utilization of Solid Waste Resources", showcasing cutting-edge research, policies, and practices that address the sustainable management, recycling, and resource recovery of industrial, municipal, and mining-related solid waste. We seek contributions that emphasize innovative solutions to reduce environmental footprints, mitigate carbon emissions, and enhance resource efficiency across sectors.

Guest Editors

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About the Journal

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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