

Special Issue

Energy Efficient, Low Carbon and Energy Flexible Buildings

Message from the Guest Editors

This Special Issue of *Buildings* aims to publish a collection of articles focused on energy-efficient, low-carbon and energy-flexible buildings. We welcome papers presenting new research results and proven practices aimed at reducing the energy needs of a building and improving indoor environment quality, as well as those considerably advancing building science. Special attention will be given to practical and experimental research articles reporting significant innovations. Articles reporting advances in theoretical and simulation methods are welcome once results are fully validated using appropriate experimental data, as well as those reporting application of numerical or theoretical methods for the analysis of new technology and materials and innovative designs. Additionally, this Special Issue is also focused on innovative, cutting-edge technologies and knowledge, all rigorously verified with measurement and analysis. We encourage submissions of collaborative, multidisciplinary research results with broader significance.

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.

Editor-in-Chief

Prof. Dr. David Arditi

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).