Special Issue

Research on Energy Efficiency and Low-Carbon Pathways in Buildings

Message from the Guest Editors

The construction and operation of buildings account for a major part of global carbon emissions. This Special Issue invites innovative research focusing on cutting-edge methods, technologies, and policies aimed at improving energy efficiency and promoting low-carbon development in buildings. Research areas may include, but are not limited to, the following topics:

- Building energy efficiency;
- Integrated energy system in buildings;
- Renewable energy sources utilization for buildings;
- Energy demand reduction/management for buildings;
- Urban energy systems;
- Environment and buildings;
- Low-carbon building materials;
- Retrofit and refurbishment of existing buildings;
- Lifecycle carbon analysis;
- Economic analysis of low-/zero-carbon buildings;
- Socio-economic and policy issues in low-/zero-carbon buildings;
- Artificial intelligence for energy efficiency and low-carbon buildings.

For more information, please visit the special issue link: https://www.mdpi.com/journal/buildings/special_issues/L77TXFALZ5

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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

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