Special Issue

Modeling and Simulation of Building Energy System

Message from the Guest Editor

This Special Issue highlights strategies for improving energy efficiency and innovative technologies for sustainable buildings and we encourage researchers from diverse disciplines to collaborate, propose new ideas, and contribute to the development of practical solutions. The Special Issue covers, but is not limited to, the following topics:

- High-efficiency building envelope systems
- Renewable Energy Integration
- Smart Building Technologies
- Energy-Efficient Building Materials
- Net Zero Energy Building (ZEB) Implementation Technologies
- Green Remodeling and Energy Efficiency Improvements
- Urban-Scale Energy Efficiency
- Building Energy Performance Simulation and Optimization
- Energy Efficiency Policies and Standardization
- User-Centric Energy Saving Technologies
- Machine Learning and Artificial Intelligence Applications
- Virtual Sensor Technologies
- Digital Twin Technologies
- Circular Economy and Energy Efficiency
- Harmonization of Indoor Environmental Quality and Energy Efficiency

We look forward to sharing your valuable research findings through this Special Issue and advancing building energy efficiency to support a sustainable future.

Guest Editor

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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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