



## Creation of a Low-Carbon Healthy Building Environment with Intelligent Technologies

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### Message from the Collection Editors

This Special Issue aims to gather innovative research and development in intelligent buildings to create a low-carbon, healthy, and comfortable building environment. The Special Issue covers original research and review studies, including but not limited to:

- Online monitoring and prediction
- Low-cost sensing and detection
- Low carbon heating and cooling
- Sustainable architecture design
- Demand-based control and optimization
- Modeling, control, and optimization of HVAC and lighting systems
- Measurement and analysis of building energy and environment data
- Intelligent control of building integrated renewable energy systems
- Artificial intelligence for building energy and environment systems
- Power management, video surveillance, data acquisition, and network





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## 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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