

Special Issue

Towards Carbon Neutrality: Recent Advances in Sustainable Building Energy and Thermal System Management

Message from the Guest Editors

Building sectors are responsible for approximately 38% of total global energy consumption, which directly and indirectly causes more than 40% of global carbon emissions. Thus, the building sector plays a significant role in global energy conservation and achieving global carbon neutrality. This Special Issue aims to share the latest understanding, technologies, and methods for realizing carbon neutrality through sustainable building energy and thermal system management, with the goal of creating a highly energy-efficient, low-carbon, and smart energy community. Topics include but are not limited to: **1. Energy community:**

a. Energy circulation (e.g., waste heat recoveries); b. Thermal energy storage; c. Renewable energy and heat pumps; d. Demand-side management; e. Low-temperature heating; f. High-temperature cooling. **2. Near-zero-energy buildings:**

a. Optimal design for new buildings; b. Retrofit solutions; c. Performance analysis and fault diagnosis; d. Building performance simulation. **3. Life cycle assessment:**

a. Embodied energy of building materials and products; b. Tools and methods; c. Policies; d. Case studies on new buildings and retrofitting.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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