



Progress for Energy System in Building

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Deadline for manuscript
submissions:

closed (31 December 2023)

Message from the Guest Editors

Dear Colleagues,

In buildings, energy systems are the main source of energy consumption and carbon emissions, as well as the decisive factor affecting residents' comfort and health. This Special Issue aims to provide a communication platform for reporting the latest research progress for energy systems in buildings and evaluating the effectiveness of relevant scientific theories, advanced technologies, and operation and management optimization strategies applied in building energy system improvement. The research scope includes, but is not limited to:

- Innovative building energy systems, including heating, ventilation, air conditioning, lighting, fire protection, elevators, and power supply;
- Optimization of building energy systems;
- New technologies for renewable energy applications in building energy systems, such as building integrated solar thermal, building integrated photovoltaic (BIPV), energy storage, ground source/water source heat pumps, etc.;
- Building information technology, building energy consumption simulation technology, intelligent building management technology.





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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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