Special Issue

Advances in Green Building Systems

Message from the Guest Editors

Green buildings make use of designs that optimise air leakage, allow for a free flow of air, use high-performance windows and insulation techniques, and use renewable energy. These techniques are meant to increase energy efficiency and indoor environmental quality in buildings by reducing the dependence on fossil fuels, air conditioning and interior heating. The 2-Degree Scenario proposed by the Paris Agreement requires that building-related CO2 emissions drop by 85% from current levels by 2060, which requires all new buildings to be zero carbon by 2030, and existing buildings to be net zero carbon by 2050. The main aim of this Special Issue is to explore the recent advances and challenges in green buildings and topics include, but are not limited to, the following:

- Green building assessment and communication;
- Green building certifications;
- Costs and benefits;
- Energy efficiency;
- Indoor environmental quality and thermal comfort;
- Measurement of building performance;
- Construction and maintenance;
- Innovations in green building systems;
- Occupant health, satisfaction and productivity;
- Green buildings and COVID-19 risk mitigations.

Guest Editors

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Deadline for manuscript submissions

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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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