

## Energy Optimization: Advanced Technologies Applied in Green Buildings

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Deadline for manuscript  
submissions:

**10 June 2024**

### Message from the Guest Editors

More than 1/3 of the total energy of IEA countries are consumed in buildings. The last shortage in energy supply and the increasing energy prices in the last years are increasing the importance of the green buildings. Beside the efficient energy consumption, Green buildings also define the utilization of the materials from start of the structure to abandon buildings and recycling of the used materials. Until today very good achievements were already made on the green buildings and many new technologies are emerging in the last years. In this special issue “Energy Optimization: Advanced Technologies Applied in Green Buildings”, applied advanced technologies in Green Buildings aim to be presented and introduced to researchers, scientist, engineers, architectures and other people who interested on these topics.

Research studies, applied theoretical or experimental works and reviews papers are expected for this special issue. Relevant topics, including but not limited: Energy efficiency in buildings; New heating & cooling and air conditioning technologies; Ground / water / air heat pump systems; Passive houses; Energy storages in buildings, etc.



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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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