

Special Issue

Advances in Materials, Technologies and Controls for Sustainable Buildings

Message from the Guest Editors

Providing comfortable indoor conditions is a primary function of buildings, and a large amount of energy is consumed to maintain indoor comfort conditions. For example, the building sector accounts for about 30% of the total energy consumption in the world. Therefore, there have been large efforts to reduce energy consumption by developing new materials and technologies for buildings. They include advances in passive measures (e.g., superinsulation, airtightness envelopes, high-performance windows, daylight harvesting systems, phase change materials, etc.) and active systems (e.g., energy-efficient heating, ventilating, and air-conditions systems; on-site renewable energy generation; innovative electrical lighting; energy storage systems; etc.). New materials and technologies are indispensable for the design and operation of sustainable buildings which are energy efficient without sacrificing occupant comfort. The main aim of this Special Issue is to provide a platform for a wide range of professionals to understand and discuss the major challenges and recent advancements in materials and technologies in sustainable buildings.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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