

Special Issue

Advanced Low Carbon Energy Systems for Built Environment

Message from the Guest Editor

The building sector is responsible for about 38% of energy-related CO₂ emissions worldwide, mainly due to heating and cooling of rooms and domestic hot water consumption. Such a figure also measures the potential for reducing non-renewable energy consumption. Several actions can be implemented in both existing and new construction buildings. Aside from interventions on the building envelope (passive), advanced energy systems (active) focus on high efficiency in terms of the Primary Energy Ratio (PER) concerning the carbon efficiency of national energy systems in different countries. Solutions for heating/cooling generation, distribution, emission, and ventilation, as well as innovative AI-based control systems, are considered.

Guest Editor

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