Special Issue

Heat Pumps and Renewably Powered Acclimatization Systems Toward More Sustainable Buildings

Message from the Guest Editors

This Special Issue explores cutting-edge research on heat pump systems and renewable energy-powered HVAC solutions in sustainable buildings. With growing focus on energy efficiency and economic benefits, we aim to investigate deeper sustainability outcomes using advanced thermodynamic analyses, particularly the second law of thermodynamics, exergy, and entropy generation. We welcome studies that look at the building as an integrated system, optimizing energy usage while considering occupant wellness. Additionally, this issue will cover how HVAC systems, especially during the COVID-19 pandemic, have played a key role in reducing viral spread through air circulation and filtration. We encourage contributions on:

- Sustainable HVAC plants integrated with building subsystems
- Renewable-based heat pumps using solar energy or Peltier cells
- Innovations in energy efficiency and heat recovery strategies
- Studies addressing microclimatic control and reducing local discomfort
- Internal ventilation strategies to mitigate viral spread

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

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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