Special Issue

Energy Systems and Thermal Management for Sustainable Buildings

Message from the Guest Editors

According to the International Energy Agency 2021 report, energy consumption for building cooling has more than tripled over the past three decades, with cooling accounting for nearly 20% of total building electricity use. The demand for cooling will continue to grow for many years to come due to improving global economic conditions and changing regional climate. Under current policies and technologies, more than 13 new cooling devices are expected to be installed worldwide every second by 2050. In addition to concerns about high energy consumption, the large-scale use of refrigeration equipment based on the vapor-compression cycle will bring with it some environmental hazards. In recent years, sustainable buildings have received widespread attention around the world, with the aim of reducing energy consumption and protecting the environment. Efficient energy systems and effective thermal management are key to achieving building sustainability. To this end, this Special Issue was proposed here to gather review and original research papers focused on materials, processes, and technologies with applications on sustainable buildings.

Guest Editors

Dr. Haifeng Jiang

Associate Professor, School of Power and Mechanical Engineering, Wuhan University, Wuhan 430072, China

Dr. Junxian Pei

College of Water Resource & Hydropower, Sichuan University, Chengdu, Sichuan 610065, China

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Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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