Special Issue

Improvement of Air Conditioning Technologies Towards Energy Efficiency

Message from the Guest Editors

The annual electricity consumption for air conditioning (AC) in commercial, industrial, and residential sectors has reached 35 to 50% of the total electricity production. By the end of the 21st century, the electricity consumption by AC will reach a whopping 53,000 TWh/yr, emitting as much as about 35 GTon/year of CO2 to the ambient by power plants. Therefore, it is of great importance to develop sustainable AC technologies that improve energy efficiency and reduce emissions. This Research Topic aims to embrace various research aspects of sustainable air conditioning technologies, including but not limited to evaporative cooling, absorption/adsorption cooling, desiccant dehumidification, membrane dehumidification, environmentally friendly refrigerants, and renewable energy utilization in air conditioning. We invite researchers to share their unique experience and views and discuss research solutions, limitations, and conclusions relevant to sustainable air conditioning. We hope that the proposed collection of articles will address advances in air conditioning technologies and lead to the development of more energy-efficient and environmentally friendly systems.

Guest Editors

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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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