Special Issue

Power Electronics-Based Modern DC/AC Hybrid Power Systems

Message from the Guest Editors

For centuries, the continuous utilization of fossil energy sources has unleashed substantial amounts of waste gases, like carbon dioxide, into the atmosphere. Consequently, dramatic climate changes, such as the daunting greenhouse effect, and the increasingly frequent occurrence of extreme weather events that impact human life significantly. To deal with the pressing challenge of climate change, there is a growing reliance on renewable energy sources such as solar and wind power due to their eco-friendly and low-carbon characteristics. To develop clean-power pathways that integrate renewable energy resources, a novel type of DC-AC hybrid power system is urgently necessary, where power electronics are the crucial technology that enables the efficient use, distribution, and generation of renewable energies. This special session will comprehensively explore the diverse facets of power electronics-based DC-AC Hybrid power systems across various application scenarios, aiming to lay the groundwork for the development of the novel hybrid power system.

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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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