

Special Issue

Modular Multilevel Converter for Photovoltaic Applications

Message from the Guest Editor

The consumption of fossil fuels is leading to increasing concerns about the environment and is pressing for more efforts to promote renewable energy sources. Solar photovoltaic (PV) systems are a promising solution to replace the coal, oil and natural gas electricity generators, especially when they are close to reaching price parity. Multi-megawatt large-scale PV electricity plants became a favourable choice for meeting the rapid growth in electrical demands, as they can be installed in a short period (6–12 months). Large-scale PV power plants are expected to have power higher than 5 MW and can be connected directly to medium voltage networks. To achieve this, modular multilevel converters (MMCs) are expected to play an important role in these PV power farms, in order to build compact and efficient power conversion systems. The aim of this Special Issue is to receive scientific contributions regarding large-scale PV power systems in terms of new modular power converters, stability analysis, design and control of modular converters in the context of PV energy systems, and grid support functions from PV plant systems, as well as other similar topics.

Guest Editor

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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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