Special Issue

Power Conversion and Control in Photovoltaic Power

Message from the Guest Editor

Innovations in power conversion for PV have been accelerating and include all areas of the power electronics value stream. These solutions incorporate everything from advanced devices (e.g. size, weight, and power advanced through the use of wide bandgap semiconductors) to novel topologies (e.g. multi-stage direct medium voltage interconnection) to novel control schemes (e.g. grid forming inverters) to advanced system implementation (e.g. aggregation of deployed system, grid forming control). For next generation PV to supplant conventional generation solutions from all aspects of this value stream will be necessary.

- Power electronics for photovoltaics
  - Advanced devices
  - Size, weight, and power improvements
- Power conversion topologies
  - Multi-stage topologies
  - High ratio conversion
  - Direct medium voltage interconnect
- Power electronics control
  - Grid forming
  - Grid following
- Grid integration for utility and distributed PV
- PV system control
  - Aggregation
  - Virtual Power Plant
  - Primary, secondary, and tertiary reserve
- PV system reliability
- Protection of high PV penetration systems

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2023)

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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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