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## Power Electronics Technologies and Applications for EV Battery Charging Systems

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### Message from the Guest Editors

Dear Colleagues,

This Special Issue focuses on research and development in emerging power electronics technologies and applications for EV Battery Charging Systems. The topics of interest for publication include, but are not limited to, the following:

- New topologies and control systems for unidirectional or bidirectional power converters applied to EV Battery Charging Systems.
- EV Battery Charging Systems for slow charging and/or fast charging in single-phase AC, three-phase AC, and DC.
- Unified power electronics converters for Electric Vehicles with functions of the Electric Motor Drive and the Battery Charging Systems.
- Innovative operation modes for EV Battery Charging Systems framed with Smart Grids and Smart Homes: G2V, V2G, V2H, V4G, V2V, etc.
- New topologies and/or control strategies for EV Battery Charging Systems with added power quality functionalities.
- Wireless Power Transfer (WPT) technologies for EV Battery Charging Systems.
- Optimization of the operation of EV Battery Charging Systems in function of the Energy Storage System and operation modes.
- Microgrids operation with EV Battery Charging Systems, Renewable Energy Generation, Energy Storage Systems, Controlled Loads, etc.
- Optimized operation of groups of EV Battery Charging Systems in electrical installations.
- Operation management of EV Battery Charging Systems for supporting future Smart Grids in terms of Distributed Generation and Demand Response.



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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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