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Smart Power Electronics Based Fast Charging Systems 2023

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims at addressing this burning issue by focusing on power converter topologies and control specifically applicable to futuristic fast charging systems as well as wireless (conductive, inductive, capacitive, and/or hybrid) charging systems. Topics of interest include (but are not limited to):

- Wireless and plugged charging power converter topologies;
- Static and dynamic (in-motion) wireless charging;
- Inductive and capacitive power transfer (IPT/CPT) coupler designs and compensation techniques;
- Power converters and control for health-conscious fast charging;
- Battery energy management systems and thermal management systems for extreme rapid charging;
- Wide bandgap (WBG) devices (SiC and GaN) for extreme fast-charging converters and their control;
- Electromagnetic inference (EMI) and electromagnetic compatibility (EMC) issues;
- Autonomous vehicle-to-vehicle (V2V) charging;
- Renewable energy/smart-grid-integrated chargers/converters;
- Futuristic charging station infrastructure design and development;
- Power electronics to solve grid-side power quality issues;
- Standards and policies for plugged and wireless fast charging.



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Special Issue



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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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