Special Issue

High-Power and Efficient Wireless Charging for Electrified Transportation

Message from the Guest Editors

Wireless power transfer is being increasingly considered as a practical solution for charging electric vehicles. Particularly, systems based on inductive coupling with resonant compensation have already proven their feasibility and have reached commercial maturity at moderate power levels. Inductive charging systems have advantages in terms of user-friendliness and their ability to operate in harsh climates. Moreover, this can be further emphasized by opportunity charging and dynamic charging. They are considered a perfect match for future self-driving vehicles and other electrified transportation. This Special Issue aims to address the subjects of efficiency, safety, and perspectives of high-power wireless charging systems for electric vehicles. All the following studies are welcome: theoretical and experimental studies on IPT systems; studies concerning the modeling of wireless charging systems as a whole, or limited to the coils and the circuits; studies focusing on the topologies of AC–DC and DC–AC conversion systems. Furthermore, studies concerning magnetic field emissions, dosimetry, and shielding techniques will be considered.

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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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