Special Issue

MEPT (Maximum Efficiency Point Tracking) Techniques for Wireless Electric Vehicle Battery Charging

Message from the Guest Editors

Wireless charging technology has been rapidly developing in recent years, with the aim of eliminating the disadvantages of plug-in charging. The most common method that has been implemented is inductive power transfer (IPT): in the primary side, a primary transmitter coil is fed by a switching inverter and energized by an AC current producing a time-varying magnetic field which is linked, in the secondary side, to a receiver coil, separated by a large air gap; the induced voltage in the secondary coil is rectified and used for battery charging. Controllers, matching circuits and sensors complete the system. It is well-known that the power transfer capability of these systems strongly depends on the misalignment between transmitter and receiver coils. One of the methods used to achieve high efficiency during misalignment is based on the adoption of suitable MEPT (maximum efficiency point tracking) control techniques on converters in the secondary side. This Special Issue welcomes original papers on innovative MEPT techniques expressly designed for wireless electric vehicle battery charging, thus giving researchers an opportunity to share and disseminate their latest results.

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Deadline for manuscript submissions

closed (20 August 2024)

Electronics

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Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/176428

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

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