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Grid Integration of Electric Vehicles Using Wireless Power Transfer

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Deadline for manuscript submissions:
closed (30 April 2022)

Message from the Guest Editors

In the present context of global warming resulting from the emissions of greenhouse gases, the electric vehicle begins to position itself in the market as a feasible and realistic alternative to the combustion engine. The deployment of the electric vehicle not only brings along a reduction in the carbon footprint related to transport, but it provides further benefits such as an increase in the air quality along with a reduction in noise pollution. Both issues are of especial relevance in urban areas.

The objective of this Special Issue is to publish the most recent research results that aid in the integration of the electric vehicle within electricity grids, using wireless energy transfer systems.

- Wireless power transfer topologies for charging electric vehicles (inductive, capacitive, etc.).
- Design of magnetic or capacitive coupling stages for wireless power transfer.
- Control design of wireless power transfer systems applied to the charge of electric vehicles.
- Resonant topologies, resonant converters, and power electronics.
- Dynamic wireless charging for electric vehicles.
- Bidirectional wireless power transfer systems applied to the vehicle-to-grid (V2G) concept.

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Message from the Editor-in-Chief

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