

Special Issue

Advances in Wireless Power Transfer Technologies for Sensor Applications

Message from the Guest Editor

Wireless power transfer (WPT) has emerged as a transformative technology for powering sensor networks, enabling autonomous operation in environments where wired charging or battery replacement is impractical. This Special Issue(SI) explores the latest advancements in WPT techniques—including inductive coupling, resonant coupling, radio frequency (RF) energy harvesting, and laser-based power transmission—tailored for sensor applications. Topics of interest include efficiency optimization, miniaturization of WPT systems, energy management strategies, and integration with IoT and wearable devices. This SI welcomes contributions from papers that focus on the latest advances in WPT technology in the above or other applications. Topics of interest of this SI include, but are not limited to, the following:

- State of the art in inductive/capacitive WPT technologies;
- Far-field WPT systems based on radio frequency, laser, or ultrasound;
- Finite Element Analysis (FEA)-based designs of WPT coils, ferrites and shieldings;
- Power electronic converters—modeling, analysis, design, and testing;
- WPT compensation networks including both active and passive types;

Guest Editor

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. *Sensors* organizes Special Issues devoted to specific sensing areas and applications each year.

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