Special Issue

Smart Power Electronics Based Fast Charging Systems 2024

Message from the Guest Editors

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.

Guest Editors

Prof. Dr. Sheldon Williamson

Electrical, Computer and Software Engineering, University of Ontario Institute of Technology, Oshawa, OR L1H 7K4, Canada

Dr. Hua Bai

Department of Electrical Engineering and Computer Science, The University of Tennessee, Knoxville, Knoxville, TN 37902, USA

Deadline for manuscript submissions

closed (31 December 2024)

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/146995

Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

mdpi.com/journal/energies

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/journal/energies

About the Journal

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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)

MDPI