

Special Issue

Advanced Power Electronics for Intelligent and Efficient Energy Conversion

Message from the Guest Editors

The global transition toward sustainable and electrified energy systems has increased the need for advanced, efficient, and intelligent power electronic technologies. This Special Issue highlights progress in power electronics design, control, and applications for modern energy conversion systems. We invite contributions on innovative converter topologies, advanced control strategies, and high-efficiency interfaces for renewable energy, energy storage, electric transportation, and smart grids. Topics include wide-bandgap converters, multilevel architectures, grid-forming and grid-following control, and power quality improvement. This Special Issue also welcomes research on intelligent and data-driven power conversion, including AI-assisted control, digital twins, machine learning optimization, and real-time monitoring. Concepts such as integrated power and data transfer, cyber-physical systems, decentralized networks, and intelligent energy management are encouraged. Contributions on reliability, thermal management, electromagnetic compatibility, fault diagnosis, and cost-effective implementation are valued, especially with experimental validation and practical applications.

Guest Editors

Dr. Ruichi Wang

Dr. Chengmin Li

Dr. Mohamed Diab

Dr. Xingshuo Li

Deadline for manuscript submissions

15 December 2026



Electronics

an Open Access Journal
by MDPI

Impact Factor 2.9
CiteScore 7.0



mdpi.com/si/280716

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

[mdpi.com/journal/
electronics](https://mdpi.com/journal/electronics)





Electronics

an Open Access Journal
by MDPI

Impact Factor 2.9
CiteScore 7.0



[mdpi.com/journal/
electronics](https://mdpi.com/journal/electronics)



About the Journal

Message from the Editor-in-Chief

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.

Editors-in-Chief

Prof. Dr. Flavio Canavero

Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

Prof. Dr. Sergio Busquets-Monge

Electronic Engineering Department, Universitat Politècnica de Catalunya, 08028 Barcelona, Spain

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) /
CiteScore - Q1 (Signal Processing)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2026).