

Special Issue

Applications of Power Electronics, Triboelectric Nanogenerators, Sensors and Artificial Intelligence in IoT and Power Grids

Message from the Guest Editors

This Special Issue is dedicated to the study and integration of emerging technologies, including power electronics, triboelectric nanogenerators (TENGs), sensors, and artificial intelligence (AI), into the Internet of Things (IoT) and power grids. Submissions are invited that discuss the performance and practical applications of TENGs in grid environments. Topics of interest include, but are not limited to, the following:

- Integration of new energy sources into the power grid;
- Power electronics (SiC, GaN, Si, etc.);
- Material, design, fabrication, integration, and reliability of power systems;
- Emergency power support using TENGs in the power grid;
- Self-powered sensing for human care;
- Storage and computing systems in sensors;
- The role of artificial intelligence (AI) in grid management;
- AI applications in power distribution and optimization;
- AI-driven security and privacy protection in the power grid.

Guest Editors

Prof. Dr. Zhiyuan Zhu

College of Electronic and Information Engineering, Southwest University, Chongqing 400715, China

Dr. Jian Sun

College of Electronic and Information Engineering, Southwest University, Chongqing 400715, China

Deadline for manuscript submissions

closed (10 March 2025)



Electronics

an Open Access Journal
by MDPI

Impact Factor 2.6
CiteScore 6.1



mdpi.com/si/214154

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 2.6
CiteScore 6.1



[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 guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero

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

Author Benefits

High Visibility:

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

Journal Rank:

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

Rapid Publication:

manuscripts are peer-reviewed and a first decision is
provided to authors approximately 16.8 days after
submission; acceptance to publication is undertaken in 2.4
days (median values for papers published in this journal in
the first half of 2025).