

## Special Issue

# Efficiency- and Reliability-Oriented Design of Power Electronic Devices, Converters, and Systems

### Message from the Guest Editor

This Special Issue aims to reveal the current research, challenges, and prospects related to the efficiency- and reliability-oriented design of power electronics. Topics that will be covered include, but are not limited to, the following:

- The modeling, simulation, and assessment of the efficiency and reliability of power components, converters, and systems.
- Control strategies to improve the efficiency of power electronic converters and systems.
- Control strategies to enhance reliability such as voltage and current stress mitigation, power loss and thermal balancing, fault tolerance, and so on.
- Optimal hardware design such as power device selection, topology improvement, protection systems, and so on.
- Prototype demonstration with efficiency- and reliability-oriented design.
- State-of-the-art reviews on efficiency- and reliability-oriented design.

---

### Guest Editor

Dr. Chaochao Song

Energy Technology, Aalborg University, Aalborg 9100, Denmark

---

### Deadline for manuscript submissions

20 October 2025



## Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/si/231377](https://mdpi.com/si/231377)

*Electronics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[electronics@mdpi.com](mailto: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 guestedited 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), CAPlus /  
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).