

## Special Issue

# Challenges, Innovation and Future Perspectives of GaN Technology

### Message from the Guest Editor

Dear Colleagues, This Special Issue is aimed at addressing some of the above challenges. This includes but not limited to:

- Next-generation GaN device architecture with or without new material;
- Good linearity GaN devices;
- High power density GaN devices;
- Ultra-high switching speed GaN devices;
- Terahertz and sub-terahertz GaN devices;
- Ultra-high bandwidth GaN power amplifier;
- AI-assisted GaN fault detection and mitigation;
- AI-assisted and model-based GaN design;
- Device modeling for performance and reliability study;
- AI-assisted GaN RF amplifier for next-level performance;
- Digital GaN power amplifier for audio applications;
- Low-voltage GaN DC to DC converter;
- GaN integration technology including CMOS, logical gates, etc.;
- GaN technology integration with other technologies such as silicon and others;
- GaN in quantum electronics;
- GaN in space applications;
- GaN fabrication challenges and improvement;
- GaN manufacturing challenges and improvement;
- Ultra-high speed digital GaN;
- GaN for 5G and 6G communication networks;
- GaN CMOS.

### Guest Editor

Dr. Koon Hoo Teo

Mitsubishi Electric Research Laboratories, Cambridge, MA 02139, USA

### Deadline for manuscript submissions

closed (15 October 2024)



## Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/si/171909](https://mdpi.com/si/171909)

*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 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), 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).