Special Issue

Electrical Characterization of Wide Bandgap Devices for Modern Power Electronics

Message from the Guest Editor

The design and characterization of wide-bandgap (WBG) devices for modern power electronics, to be used especially in high-voltage/high-frequency/high-temperature applications, require intensive experimental and modelling efforts for the analysis of the critical aspects of their operation under specific bias conditions. In recent years, for instance, silicon carbide (SiC) and gallium nitride (GaN) have been extensively investigated. These semiconductors, if compared to the conventional Si and GaAs technologies, promise the realization of smaller, faster, and more efficient and rugged devices well-suited for different fields that involve both power generation and power conversion processes, such as renewable energy systems and electrical traction drivers. However, several technological issues must be resolved in order to make the realization of WBG devices more cost-effective. The aim of this Special Issue is to collect research papers concerned with the superior electrical characteristics of WBG devices able to improve the current and future power electronics.

Guest Editor

Dr. Fortunato Pezzimenti

Department of Information Engineering, Infrastructure and Sustainable Energy, Mediterranea University of Reggio Calabria, Via Salita Melissari, 89124 Reggio Calabria, Italy

Deadline for manuscript submissions

closed (31 December 2021)

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/28362

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

mdpi.com/journal/electronics

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

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).

MDPI