Special Issue

Advances in Avalanche Photodiodes

Message from the Guest Editors

As a fundamental research area in the field of optoelectronics, light detection is an indispensable part of optical systems that bulids a bridge between light and electrical signals. Relative to many other types of photodetectors, avalanche photodiodes provide higher sensitivity and loss margins due to their internal avalanche gain. Photon-generated carriers are accelerated by the electric field and impact ionize more electron-hole pairs, acting as an internal amplifier. Accordingly, they are ideal receivers for weak light signals or efficient optical systems. The detectable weak light is even down to a single photon, also known as single-photon avalanche diodes (SPADs). The objective of this Special Issue is to document the current advances in avalanche photodiodes, including the latest progress and trends in avalanche photodiodes, state-of-the-art or innovative device-level demonstrations, physical or numerical theory, integration or packaging, and system-level applications.

Guest Editors

Dr. Yuan Yuan
Hewlett Packard Labs, Hewlett Packard Enrerprise, Milpitas, CA, USA
Dr. Yiwei Peng
Hewlett Packard Labs, Hewlett Packard Enrerprise, Milpitas, CA, USA

Deadline for manuscript submissions

closed (15 November 2023)

hv

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/si/137738

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

mdpi.com/journal/photonics

MDPI

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/journal/photonics

MDPI

About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

Editor-in-Chief

Prof. Dr. Nelson Tansu
School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

Author Benefits

High Visibility:

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

Journal Rank:

CiteScore - Q2 (Instrumentation)

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 1.9 days (median values for papers published in this journal in the first half of 2025).