# Special Issue

# Optoelectronic Oscillators (OEO): Principles and Applications

## Message from the Guest Editors

Optoelectronic Oscillators (OEOs) are promising solutions for the generation of microwave signals with ultra-low phase noise. This Special Issue aims to provide a comprehensive collection of research that delves into the fundamental principles and diverse applications of OEOs. Aligned with the scope of the journal *Photonics*, which focuses on the science and technology of optics and photonics, this issue seeks to highlight cutting-edge advancements in the design, optimization, and implementation of OEOs. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but need not be limited to) the following:

- Fundamental principles and mechanisms of OEOs.
- Novel designs and configurations of OEOs.
- Performance optimization, including phase noise reduction, tunability enhancement, or side mode suppression.
- Applications of OEOs in sensor networks, navigation and meteorology, synthetic aperture radars, space communications, and frequency delivery over ultralong distances.
- Integration of OEOs.

## **Guest Editors**

Prof. Dr. Wei Li

Prof. Dr. Sha Zhu

Dr. Yali Zhang

## Deadline for manuscript submissions

20 August 2025



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mdpi.com/si/214306

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

mdpi.com/journal/ photonics





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## 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 peerreviewed 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

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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).

