

Special Issue

Application and Development of Optoelectronic Oscillators (OEOs) in Microwave Photonics

Message from the Guest Editors

Since the microwave generation by an optical link followed by a feedback loop, called an optoelectronic oscillator (OEO) was proposed, several analyses and configurations were proposed. The OEO aspects, such as tunability, side mode components, frequency stability, and phase noise, are currently under active investigation. Single- and multi-feedback loops were proposed, and RF signal injection studies were carried out. Oscillators are critical subsystems in microwave technology and can be used for different purposes. This Special Issue invites manuscripts that introduce the recent advances in optoelectronic oscillators and also review papers. All theoretical, numerical, and experimental papers are accepted. Topics include, but are not limited to, the following:

- Optoelectronic oscillators;
- Applications of optoelectronic oscillator;
- Injection and pulling effects for optoelectronic oscillators;
- Output signal characteristics of optoelectronic oscillators;
- Simulation of optoelectronic circuit;
- Optoelectronic oscillator technology;
- Integrated optics and optoelectronic oscillators;
- Microwave output signal shaping;
- Pulsed microwave generation.

Guest Editors

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Deadline for manuscript submissions

closed (20 July 2025)



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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.

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