# Special Issue

# Photonic Integrated Circuits: From Fundamentals to Emerging Technologies

## Message from the Guest Editors

Photonic integrated circuits (PICs) are revolutionizing modern technology by addressing the critical demand for ultrahigh-speed, energy-efficient solutions across optical interconnects, computing, and sensing applications. From data centers and AI hardware to agrifood, biomedical, and aerospace systems, PICs enable unprecedented performance gains. Recent advances in semiconductor materials, heterogeneous integration, and AI-driven design tools further accelerate this transformation. This Special Issue highlights cutting-edge research and transformative innovations in PICs, bridging fundamental discoveries and real-world impact. It aims to curate high-quality contributions advancing the science, design, and application of PICs, aligning with the journal's focus on photonics, materials, and integrated technologies. We seek to assemble a collection of at least 10 articles (original research or reviews) that address both theoretical and practical challenges in photonic integration, with potential for publication as a printed book. Submissions should emphasize novel methodologies, scalable solutions, or disruptive applications within the scope.

## Guest Editors


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## Deadline for manuscript submissions

30 April 2026


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CiteScore 3.5

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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 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

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