Special Issue

Recent Progress in Biomedical Optical Technologies

Message from the Guest Editors

Over the past decade, innovations in photonics and optical engineering have profoundly transformed biomedical sensing and measurement. Emerging optical technologies—enabled by advances in light sources, detectors, optical components and computational methods—are providing unprecedented capabilities for non-invasive, real-time and high-resolution monitoring of physiological parameters and tissue function. This Special Issue aims to highlight recent breakthroughs in optical methods, instruments and their integrated applications, with a particular emphasis on health sensing and diagnostic technologies. We invite contributions that explore novel optical techniques, system designs and translational applications in biomedicine. Topics of interest include, but are not limited to

- Functional near-infrared spectroscopy and near-infrared spectroscopy
- Diffuse optical tomography and imaging
- Photoplethysmography and its advanced derivatives
- Medical magnetic resonance imaging and analysis
- Wearable and portable optical health sensors
- Miniaturized and integrated biophotonic devices
- Multimodal optical sensing and hybrid imaging systems
- AI-enhanced optical signal processing and interpretation

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Deadline for manuscript submissions

31 October 2026

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Impact Factor 2.1
CiteScore 3.9

mdpi.com/si/271195

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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.

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