Special Issue

Advanced Optothermal and Optical Trapping and Manipulation: From Microscale Interfaces to Applications

Message from the Guest Editors

Recent advances in light–matter interaction at the microscale have enabled precise control over particles, soft matter, and interfacial systems, including gas microbubbles in liquids. Optical trapping and optothermal manipulation have become key techniques in photonics. Optical trapping uses radiation pressure and gradient forces for non-contact manipulation of dielectric and biological objects with submicron accuracy, while optothermal methods leverage localized heating and thermal gradients to control liquid interfaces, nanoparticles, microbubbles, and living systems. These techniques, supported by experimental and computational approaches, show promise for applications in photonic devices, lab-on-a-chip technologies, biomedical diagnostics, and environmental monitoring. This Special Issue invites contributions that advance both fundamental understanding and practical applications of these methods, with a focus on interdisciplinary and innovative strategies.

Guest Editors

Prof. Dr. Gabriel Ortega-Mendoza

Dr. Rafael Zaca Móran

Dr. Arturo Guzmán Barraza

Deadline for manuscript submissions

31 May 2026

hν

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/si/254742

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

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).