Special Issue

Nanoscale Optical Manipulation: Fundamentals, Current Advancements and Future Prospects

Message from the Guest Editors

Since Arthur Ashkin and his colleagues first demonstrated the concept of optical tweezers in 1986, the field of optical trapping and manipulation has witnessed remarkable development. Optical tweezers employ tightly focused laser beams to capture and manipulate a diverse range of objects, involving atoms, particles, living cells, and viruses. This technology has revolutionized our ability to explore the microscopic world. In addition to the use of tightly focused laser beams, near-field nanotweezers have received significant interest. They offer the advantages of low-power and stable trapping of nanosized objects. Furthermore, the integration of optofluidics and photothermal control is under rigorous study to design high-throughput and biocompatible tweezing platforms. This Special Issue, titled 'Nanoscale Optical Manipulation: Fundamentals, Current Advancements, and Future Prospects', invites contributions that explore the cutting-edge developments in the realm of optical nanomanipulation. We welcome manuscripts that discuss new fundamental physics, present experimental observations, or highlight unique perspectives on optical manipulation techniques.

Guest Editors

Dr. Chuchuan Hong

Department of Chemistry, Northwestern University, 2145 Sheridan Rd, Evanston, IL 60208, USA

Dr. Sen Yang

Institute of Physics, Chinese Academy of Sciences/Beijing National Laboratory of Condensed Matter Physics, Beijing 100190, China

Deadline for manuscript submissions

closed (30 April 2024)

hv

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/si/184224

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

MDPI

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).