

## Special Issue

# Super-Resolution Optical Microscopy: Science and Applications

### Message from the Guest Editors

Super-resolution microscopy stands as a pivotal advancement in biomedical research, enabling the visualization of biological structures beyond the diffraction limit of light. This breakthrough technology has revolutionized our ability to investigate subcellular architectures, molecular interactions, and dynamic processes with unprecedented spatial and temporal resolution. As a highly interdisciplinary field, super-resolution microscopy integrates principles from biology, chemistry, photonics, and computational science to uncover detailed morphological and functional information at the nanoscale.

This Special Issue invites the submission of high-quality basic, methodological, and applied research contributions, in the form of regular and review articles, focusing on

The development and validation of novel super-resolution microscopy techniques;  
The study of photophysical and photochemical mechanisms underlying super-resolution, including probe design, labeling strategies, and optical manipulation;  
The integration of multimodal, multispectral, or correlative approaches to enhance resolution;  
The application and validation of super-resolution methods in preclinical and clinical settings.

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### Guest Editors

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### Deadline for manuscript submissions

15 August 2026



## Photonics

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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.

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### Editor-in-Chief

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