Special Issue

Advances in Epsilon-Near-Zero Photonics

Message from the Guest Editors

For nearly two decades, the field of epsilon-near-zero (ENZ) photonics, which centers on materials with near-zero refractive index or permittivity, has experienced remarkable growth. Pioneering theoretical work sparked this interest, leading to subsequent research that revealed intriguing light–matter interactions. These interactions hold the potential to revolutionize our control of light. Notable breakthroughs include tunneling and squeezing of electromagnetic energy through subwavelength channels and waveguide bends, extreme nonlinearities, high harmonic generation, photonic doping, and frequency conversions in time-varying ENZ media. Submissions are invited across several key areas:

- Novel ENZ Materials: We welcome research on innovative approaches to reduce losses and achieve functionalities within ENZ materials.
- Fundamental ENZ Interactions: Research exploring new phenomena arising from light–matter interaction at the ENZ frequency is encouraged.
- ENZ-Based Photonic Devices: We seek demonstrations of ENZ materials' capabilities in light manipulation, nanoscale signal processing, nonlinear and quantum photonics.

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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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