Special Issue

Emerging Trends in Rare-Earth Doped Material for Photonics

Message from the Guest Editor

Rare-earth-doped materials are pivotal in advancing photonic technologies, offering unparalleled performance in lasers, amplifiers, sensors, and lighting systems. The following Special Issue, edited by et al., will highlight groundbreaking research on the synthesis, characterization, and application of rare-earth-doped materials in photonics. Topics of interest include, but are not limited to, the following:

- Novel synthesis techniques for rare-earth-doped crystals, glasses, and nanomaterials;
- Energy-efficient phosphors for LED and display technologies;
- Rare-earth-doped fiber amplifiers and lasers for telecommunications and medical applications;
- Ultrafast spectroscopy and dynamics of rare-earth ions in photonic matrices;
- Emerging applications in quantum technologies, biosensing, and environmental monitoring;
- Machine learning-guided design of rare-earth materials for tailored photonic properties.

Guest Editor

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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.

Editor-in-Chief

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