

Special Issue

Recent Advances in the Synthesis and Excitonic Behavior of Nanomaterials: Photoluminescence and Optoelectronics

Message from the Guest Editors

The precisely controlled fabrication and intentionally manipulated exciton dynamics of nanomaterials could potentially lead to the exploration of novel physical properties. These could find use in many areas of electronics, optoelectronics, and photonics. However, several challenges, including structure stability, still exist in realizing optoelectronic and photonic applications. This Special Issue invites authors to submit manuscripts that introduce the recent advances in the synthesis and excitonic behavior of nanomaterials regarding photoluminescence and optoelectronics. Topics include the following:

- Preparation of nanomaterials and nanocomposites
- Optical characterization (photoluminescence (PL), Raman, etc.), microscopy, and spectroscopic characterization.
- Structure–property relationships of nanomaterials.
- Exciton dynamics.
- Surface and interface interactions.
- Optoelectronic applications of nanomaterials.
- Fabrication of optoelectronic devices and electrical characterization.

Guest Editors

Dr. Shuangyang Zou

Dr. Bedanta Gogoi

Dr. Duan Zhao

Deadline for manuscript submissions

closed (31 March 2025)



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Photonics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
photonics@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Nelson Tansu

School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

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