



Optical Properties of Semiconductor Nanostructures: Latest Advances and Prospects

Guest Editor:

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Message from the Guest Editor

The scope of this Special Issue includes, but is not limited to, the following areas:

- Theoretical studies: computational modeling, quantum mechanical simulations, and theoretical frameworks to understand the fundamental principles and mechanisms
- Experimental techniques: novel experimental methodologies, advanced spectroscopic techniques, and characterization methods
- Material synthesis and fabrication: strategies for the synthesis, growth, and fabrication of semiconductor nanostructures with tailored intraband transitions and optimized nonlinear optical properties
- Nonlinear optical phenomena: investigation and analysis of nonlinear optical effects
- Device applications: the development of practical applications, including all-optical switching, ultrafast data processing, quantum light sources, photonic devices, and optoelectronic devices
- Nanoscale engineering: design and engineering of semiconductor nanostructures
- Biomedical and sensing applications: exploration of the potential applications in biomedical imaging, sensing, drug delivery, and other biomedical





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