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Progress in Optical Characterization of Semiconductor Nanomaterials and Devices

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Message from the Guest Editor

This Special Issue will cover the latest achievements and challenges of optical techniques in order to study semiconductor (nano)materials and devices.

Topics covered include but are not limited to:

- Photoluminescence, ionoluminescence, spectroscopic ellipsometry, absorption, Fourier-transform infrared spectroscopy (FTIR), Raman and surface/tip-enhanced Raman spectroscopy (SERS, TERS), scanning near-field optical microscopy (nano-FTIR, nano-THz spectroscopy);
- Cathodoluminescence, scanning and transmission electron microscopy, energy-dispersive x-ray spectroscopy;
- Photocurrent, electroluminescence, electron beam induced current;
- III-N (InN, GaN, AlN), oxide (Ga_2O_3 , NiO_2 , ZnO), III-V (GaAs, InP, InAs) semiconductors (nanowires, quantum dots, heterostructures), 2D materials (2D transition metal dichalcogenides, MXenes) and devices (solid-state emitters, photonics, plasmonics, spintronics, photovoltaics, transistors, thermoelectrics, batteries, supercapacitors, sensors applications);
- Theory and simulation.



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Special Issue



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Message from the Editor-in-Chief

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