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Multiple Functional Applications of Wide Bandgap Semiconductor

Guest Editor:

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Message from the Guest Editor

This Special Issue is devoted to reporting the recent developments in wide bandgap semiconductors (WBGSs)-based technology and growth. Deep-ultraviolet (DUV)-based optoelectronic devices, such as photodetectors, light-emitting devices, and sensors, are drawing considerable attention from researchers and industry practitioners due to their wide range of potential applications, including environmental monitoring, imaging techniques, chemical analysis, space-to-space communications, and biological threat detection. Several attempts to fabricate DUV photodetectors or sensing devices have been made to date; however, many issues still need further investigation to enhance this technology.

We will focus on the following topics: understanding the fundamental science of structural, optical, magnetic and electrical characterization; the role of defects and strain in modulating the material properties; developed growth and fabrication methods; device fabrication and analyses; novel WBGS such as perovskite, quantum dots, and 2D materials; device characterizations including optoelectronics; sensors, electronics and photonics.

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Message from the Editor-in-Chief

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