Special Issue

Multiple Functional Applications of Wide Bandgap Semiconductor

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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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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