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Wide Bandgap Semiconductors: Growth, Characterization, Devices and System Applications

Guest Editor:

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Deadline for manuscript submissions: closed (31 May 2022)

Message from the Guest Editor

Wide bandgap semiconductors are rapidly emerging as disruptive materials for a wide range of applications. Even though some products are already available on the market, efforts are still needed to improve the performance and reliability of the devices, as well as to identify novel materials and structures toward widening the possible application fields. In order to showcase the most recent advancements, we are requesting submissions for a Special Issue on wide bandgap semiconductors and their applications. Topics of interest include but are not limited to:

- Crystal growth: Bulk growth, epitaxial growth, doping and point defects, growth methods, and related technology;
- Characterization: Optical and electrical properties, structural analysis, and theory and simulation;
- Devices: Visible, UV, and white LEDs, micro LEDs, laser diodes, solar cells, detectors, transistors, diodes, high-power and high-frequency devices, device processing, contacts, and reliability;
- System applications of wide bandgap semiconductors: Power supplies and modules, electric chargers, motor drive and control, hybrid and/or electric vehicles, and related utilities.









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Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

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