

Call for Papers

Special Issue on Wide Bandgap Semiconductor Electronics and Devices

With the dawn of Gallium Oxide electronics and commercial GaN and SiC based devices starting to gain acceptance in mainstream market; while Wide bandgap semiconductors exhibit excellent material properties, which can potentially enable power device operation at higher temperatures, voltages, and higher switching speeds than current Si technology, GaN-based electronics have also made an impact in the performance of some applications such as RF cell phone base stations, military radar. In addition, GaN and SiC based devices have also made significant inroads into the reduction in energy consumption.

With these new developments, it is timely for us to organize a special issue to promote wide bandgap electronics, and provide a platform for researchers in this field to exchange notes on works in the subject.

The topics to be covered in the special issue are as following:

- High frequency devices
- SiC and GaN power electronics
- Emerging materials: Ga₂O₃ and diamond
- Material synthesis of wide bandgap materials
- Modeling and device simulations
- Wide bandgap electronics on Si
- Reliability of electronic devices
- Defect studies
- Electronic transport properties
- Dielectrics and passivation
- Device physics
- Radiation performance of devices
- Hexagonal BN electronics

Paper Submission and Review Schedule:

- First call for papers: Dec. 1st 2018
- Second announcement: Feb. 1st 2018
- Submission Deadline: May 31st 2019
- Publication Date: June 30th 2019

Camera ready articles should be sent to ee-wbsed@buffalo.edu for consideration. Please specify the research topic on the cover page.

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