Special Issue on
Advancements of AlInGaN Based Light Emitters

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CALL FOR PAPERS

AlInGaN is a fantastic wide band semiconductor material, whose band gap ranges from Ultraviolet (UV) to Infrared (IR). AlInGaN based light emitters have developed remarkably in the last two decades and blue light emitting diodes (LEDs) are already widely used in liquid-crystal display (LCD) backlighting, large screen displays, and general lighting. Although the present commercial blue LEDs have sufficient efficiency, there are still a lot of unsolved problems in AlInGaN based light emitting devices. First, the blue LED has the problem of declining efficiency under high current injection, which limits its potential for high-power applications. The origins of these phenomena are still controversial. Second, UV LEDs, especially the Deep UV LEDs, are suffering from low efficiency. They could find applications in sterilization and water purification if their efficiency could be improved. Third, new applications such as visible light communications (VLC), laser lighting, and fine pitch displays require the development of AlInGaN based micro-LED and high-performance lasers.

In order to address these problems, this special issue aims to discuss advancements of material, devices, and the applications of AlInGaN based light emitters analytically and experimentally. Related research and review articles are welcomed.

Potential topics include but are not limited to the following:

- Material
  - Growth methods for high crystal quality nitride bulk material and QWs
  - High quality GaN or AlN substrates
- Devices
  - AlInGaN based blue LEDs
  - UV and green LEDs
  - Micro-LEDs
  - Lasers (edge emitting laser and vertical cavity surface emitting laser)
  - AlInGaN based novel optoelectronic devices
- New applications
  - Visible light communication (VLC)
  - Novel lighting and display technology

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/ijo/aabl/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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Submission Deadline
Friday, 13 July 2018

Publication Date
November 2018