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Nitride Compound Light Emitting Diodes

Guest Editors:

Dr. Julien Brault

Dr. Wang Lai

Dr. M. Ajmal Khan

Dr. Mohamed Al Khalfioui

Deadline for manuscript submissions:
closed (28 February 2021)

Message from the Guest Editors

Dear Colleagues,

To further increase the application potential of nitride LEDs, the use of other regions of the electromagnetic spectrum is highly desirable, and current the improvement of LED efficiency is based on the development of innovative routes from material growth to the device fabrication process. Indeed, LEDs with high external quantum and wall plug efficiencies require epitaxial layers with low defect densities , a highly radiative active region, doped layers with high carrier concentrations and low resistivities for efficient carrier injection and low power consumption, and a high extraction efficiency. Optimizing all these parameters via epitaxial techniques involves structural, optical, and electrical engineering in terms of strain management , quantum confinement , polarization discontinuity , device design , etc. Combining these approaches, will then lead to the emergence of high-efficiency green–red and ultra-violet LEDs and enable new applications and key technologies to be developed.

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Editor-in-Chief

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Message from the Editor-in-Chief

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