Special Issue

Advances in GaN-Based Optoelectronic Materials and Devices

Message from the Guest Editors

The emission of nitride semiconductors covers a wide spectral range, from ultraviolet to visible spectral and near infrared. Optical devices based on nitrides have potential applications in lighting, display, curing, biology, and underwater communications. Solid-state lighting based on light-emitting diodes (LEDs) is widely used today, and the Nobel Prize has been given to scientists in this field. Recently, micro/mini-LED has been attracting much attention due to its potential applications in displays and visible-light communications. Conventional LEDs are about a few hundred micrometers in diameter. The diameter of a micro/mini-LED is less than one hundred micrometers, even down to a few micrometers. With the decrease in LED size, the resolution, modulation speed, and energy consumption are greatly improved. However, emission efficiency is degraded, which strongly suppresses its application. It is therefore important to identify the way to realize highly luminescent micro-LEDs.

This Special Issue will focus on materials and devices related to GaN-based advanced optoelectronics. Topics include design, growth, process, characterization, and so on.

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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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