

Institute of Electronic Engineering and Nanotechnologies "D.GHITU" ASM

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&

Abstract Book

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Doped Oxide Nanoarchitectures for Device Applications

Lupan O., Chow L., Railean S. , Sontea V. , Pocaznoi I.

Abstract

We present an experimental approach to study Magnesium and cadmium-alloyed zinc oxide nanorods and their integration in wavelength-tunable light-emitting diodes (LEDs). Doped zinc oxide were deposited on p-GaN substrates. Low-dimensional ternary structures have been obtained for magnesium sulfate, cadmium chloride concentration in the deposition bath. Accordingly to SEM observations the cadmium-alloyed zinc oxide have a nanorod morphology. Structural analyses demonstrate that the zinc oxide nanomaterial is doped with the magnesium or cadmium incorporated within ZnO nanorods. Reported results are of great importance for wavelength-tunable LED and nanosensors applications.