

Oral Presentation

[OLED4]QD Material & Devices

Special Topics of Interest on Quantum Dot Technologies

Chair: Takeo Wakimoto (Merck Performance Materials)

Co-Chair: Toshiaki Ikuta (JNC Corp.)

Thu. Nov 28, 2019 9:00 AM - 10:35 AM Room 204 (2F)

9:40 AM - 10:00 AM

[OLED4-3]" Efficient Indium Phosphate based Quantum Dot Light Emitting Diode using Sol-gel processed Electron Transfer Layer"

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Keywords: QLED, Quantum dot, Inverted structure, InP-QD

Here, we report an efficient indium phosphate (InP) based inverted red Quantum Dot-Light Emitting Diodes (QLEDs) by incorporating a sol-gel processed Mg-doped ZnO layer. The red InP-QLED with our sol-gel processed Mg:ZnO layer reveals a maximum EQE of 7.7% , which is significantly higher than the ZnO and Mg:ZnO nanoparticles layers. These results suggest that the sol-gel processed Mg-doped ZnO layer is relatively efficient in terms of performances.