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(57) Abstract :

Finite Difference Time Domain (FDTD) modeling to improve the far field intensity of a florescent OLED is reported by interposing a Photonic crystal with hexagonal Brillouin zone between the anode layer and the substrate. The use of Photonic crystal within the OLED structure improves the far field intensity emanating from an OLED thereby resulting in higher light extraction efficiency. Light extraction from an Organic Light Emitting Diode (OLED), is limited due to the losses occurring at the substrate-air interface. Study has been carried out to analyze the effects on far field intensity when Photonic crystal with hexagonal Brillouin zone is interposed between anode and the substrate. Enhanced far field intensity is indicative of improved light extraction efficiency from an OLED. The intensity of far field was studied for various wavelengths of light and was found to be optimum for a wavelength of 530nm.

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