적색 OLEDs 전기적 특성에 미치는 유기물 (H-D)의 영향

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Affect of Organic materials defending on the Electrical Characteristics of Red OLEDs

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Abstract : In the two structure of ITO/N,N'-diphenyl-N,N' bis (3-methylphenyl)-1,1'-biphenyl-4,4'-diamine(**TPD**)/R-H : R-D/Al device, ITO/Amorphous Fluoropolymers/TPD/R-H : R-D/LiF/Al device. we studied the effect of organic materials defending on the electrical characteristics of red OLEDs. The thickness of TPD and R-H : R-D was manufactured 40 nm, 60 nm, respectively under a base pressure of 5×10^{-6}Torr using a thermal evaporation. The AF used for an hole-injection is the thickness of 0.5 [nm] and the LiF used for an electron-injection is the thickness of 0.5 [nm]. Compared to the two from the devices made with the hole injection and without hole injection We found that the luminous efficiency and the external quantum efficiency are improved a fact of one- hundred, two, respectively.

Key Words : RED OLEDs, Amorphous Fluoropolymers, Hole Injection Layer, External Quantum Efficiency, OLEDs