Application of NiOx Anode for Bottom Emission Organic Light Emitting Diode

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Abstract: OLED has many advantages of low voltage operation, self radiation, light weight, thin thickness, wide view angle and fast response time to overcome existing liquid crystal display (LCD)'s weakness. Therefore, It draws attention as promising display and has already developed for manufactured goods1). Also, OLED is regarded as a only substitute of flexible display with a thin display.

However, Indium tin oxide(ITO) thin film for electrode of OLED shows a low electrical properties and is impossible to deposit at high thermal condition because electrical characteristics of ITO is getting worse. One of the ways to realize an improved flexible OLED is to use high internal efficiency electrodes, which have higher work function than those single layer of ITO films of the same thickness. The high internal efficiency electrodes film is developed with structure of nickel oxide for bottom Emission Type of OLED.

Key Words: work function, internal efficiency, ITO, NiOx