

Phenyl-Naphthyl Amine Effect in hole transport layer and hole injection layer based on phenothiazine

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Organic light emitting diode(OLED) has been shown to have a high efficiency and a long life time as a practical OLED display. Many organic materials have been synthesized and expanded efforts have been made to obtain high performance of OLED.

Especially, aromatic amine derivatives have been used as HIL, HTL materials because of their excellent hole mobility.

In this study, we synthesized Diphenothiazyl-benzene [DPtB] and 3',7',3'',7''-Tetrakis(N-phenyl-2-naphthyl amine)-1,4-diphenothiazyl-benzene[PNA-DPtB] based on phenothiazine which is one of aromatic amine derivatives and applied it as HIL and HTL in OLEDs.