

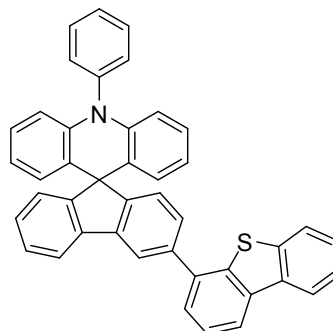


Novel Triarylamine-Based Host Materials for Highly Efficient Single-Emitting Layer White Phosphorescent OLEDs

Product Specifications

LT-N4081 STDBT4

Formula	$C_{43}H_{27}NS$
Molecular Weight	589.75 g/mole
Absorption	319 nm (in toluene)
Emission	373 nm (in toluene)
HOMO (eV)	-5.69 eV
LUMO (eV)	-2.17 eV
E_T	2.83 eV



Reference : J. Mater. Chem. C, 2013, 1, 6575–6584

Features

- STDBT4 show high thermal stabilities (T_g 149 °C, $T_d5\% > 365$ °C) which is beneficial to OLED applications by improving the film morphology and reducing the possibility of crystallization and phase separation upon heating.
- Highly efficient blue PHOLED were achieved by using STDBT4 as Host materials, the efficiency reached 41.9 cd A⁻¹ for the current efficiency (CE), 27.6 lm W⁻¹ for the power efficiency (PE) and 17.6% for the external quantum efficiency (EQE) at 1000 cd m⁻².
- Highly efficient single-emitting layer white PHOLED with maximum efficiencies of 24.0%, 77.0 cd A⁻¹ and 63.2 lm W⁻¹ and CIE coordinates of (0.38, 0.48) by using STDBT4 as Host materials was achieved.

Device Application

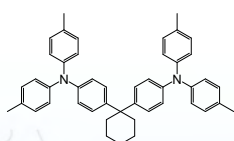
Blue OLED:

ITO/HAT-CN(10 nm)/TAPC(45 nm)/STDBT4: 8 wt% Flrpic(20 nm)/TmPyPB(40 nm)/Liq(2 nm)/Al

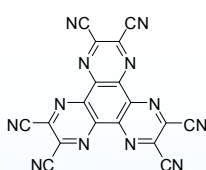
White single emitting layer OLED:

ITO/HAT-CN(10 nm)/TAPC(45 nm)/STDBT4: 8 wt% Flrpic: 1.2wt% PO-01(20 nm)/TmPyPB(40 nm)/Liq(2 nm)/Al

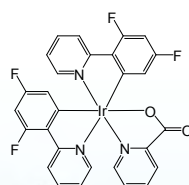
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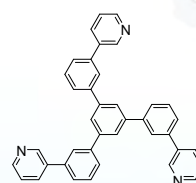
LT-N137 TAPC



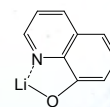
LT-N221 HAT-CN



LT-E607 Flrpic



LT-N863 TmPyPB



LT-E301 Liq

Our products are used for testing and research purpose; they are not guaranteed in patent contention by customer use.

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