



Novel bicarbazole-based Host Materials for High-Efficiency Blue Phosphorescent OLEDs with Very Low Driving Voltage

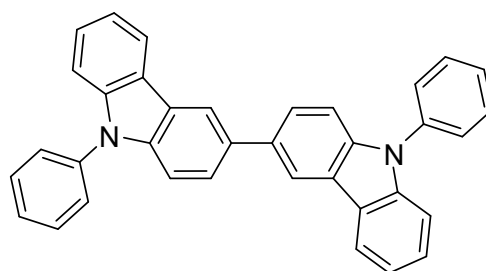
Product Specifications

LT-N4085

BCzPh

Formula	$C_{36}H_{24}N_2$
M.W.	484.59 g/mole
HOMO energy level	-5.67 eV
LUMO energy level	-2.35 eV
T_g	105 °C
T_d (5% loss)	399 °C
E_T energy level	2.87 eV
ΔE_{ST}	0.45 eV

Reference : Adv. Mater. 2012, 24, 3212–3217



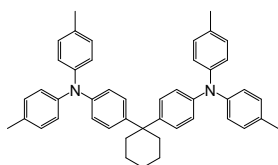
Features

- BCzPh has very small singlet–triplet energy difference (ΔE_{ST}) of 0.45 eV, which is even smaller than that of MCP (0.49 eV), therefore, BCzPh is considered to be applicable for a blue phosphorescent OLED with a reduced operating voltage.
- BCzPh-based blue OLED exhibited high PE of 45.2 lm W^{-1} (43.9 cd A^{-1} , EQE 19.7%) with an extremely low driving voltage at 3.1 V at 100 cd m^{-2} .

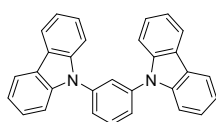
Device Application

ITO/TAPC(40 nm)/Flrpic 11 wt% doped BCzPh (10 nm)/BmPyPhB(50 nm)/LiF(1 nm)/Al

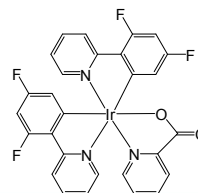
Related products from Lumtec :



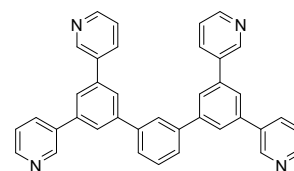
LT-N137 TAPC



LT-E107 MCP



LT-E607 Flrpic



LT-N865 BmPyPhB