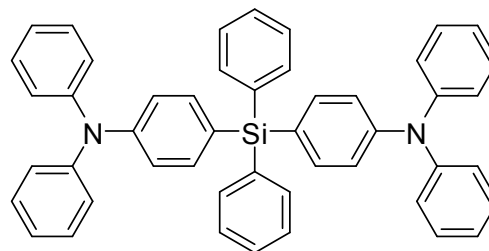


High Triplet Energy Hole Transport Material for High-Efficiency Blue Phosphorescent OLEDs

Product Specifications

LT-N182 TSBPA

| | |
|---|---|
| Formula | C ₄₈ H ₃₈ N ₂ Si |
| Molecular Weight | 670.91 g/mole |
| Absorption | 309 nm |
| Photoluminescence | 376 nm |
| HOMO (eV) | -5.90 eV |
| LUMO (eV) | -2.34 eV |
| Tg | 83°C |
| Td (5% loss) | 401 °C |
| E_r | 2.75 eV |
| <i>Reference : Synthetic Metals 167 (2013) p1–4</i> | |



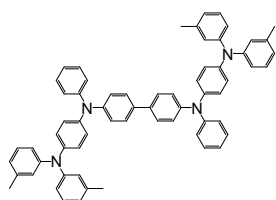
Features

- Novel diphenylsilyl based material was synthesized as a high triplet energy hole transport material for blue phosphorescent organic light-emitting diodes.
- A blue OLED with TSBPA showed a maximum quantum efficiency of 20.4% (40.1 cd A^{-1} , 25.3 lm W^{-1}) and high quantum efficiency of 18.6% at 2000 cd/m^2 (36.4 cd A^{-1} , 18.1 lm W^{-1}).
- The TSBPA device showed lower efficiency roll-off 9% at 2000 cd/m^2 , in contrast to the MCP device, the efficiency roll-off 29% at 2000 cd/m^2 .

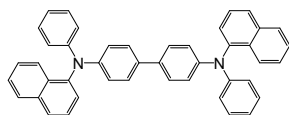
Device Application

ITO/DNTPD(60 nm)/NPB(5 nm)/TSBPA(25 nm)/mCPPO1 : FlrPic(25 nm,3%)/TSPO1/LiF(1 nm)/Al

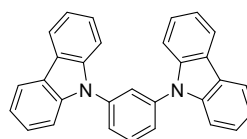
Related products from Lumtec :



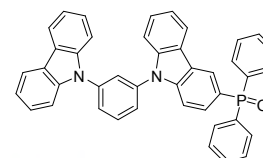
LT-N220 DNTPD



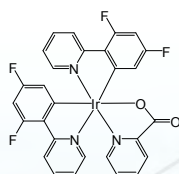
LT-E101 NPB



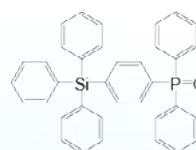
LT-E107 MCP



LT-N4047 mCPP01



LT-E607 FlrPic



LT-N4048 TSP01