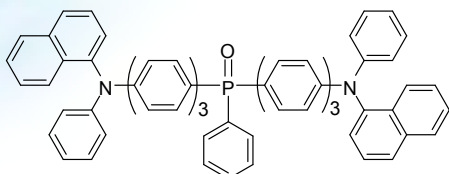




Novel Solution-Processed Small Molecules for Non-Doped Deep-Blue OLEDs

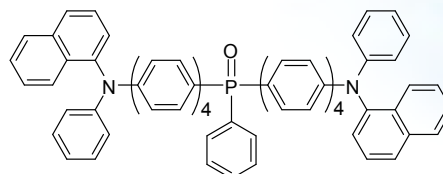
Product Specifications



LT-N4035 NP3PPO

| | |
|--|---------------------|
| Formula | $C_{74}H_{53}N_2OP$ |
| Molecular Weight | 1017.20 |
| T_g | 163 °C |
| 5% wt loss Temp | 552 °C |
| HOMO (eV) | -5.26 eV |
| LUMO (eV) | -2.30 eV |
| λ_{abs} in CH_2Cl_2 | 349 nm |
| λ_{em} in CH_2Cl_2 | 466 nm |
| Φ_{PL} in Toluene | 0.92 |

Reference : Adv. Mater. 2012, 24, 5867–5871



LT-N4036 NP4PPO

| | |
|--|---------------------|
| Formula | $C_{86}H_{61}N_2OP$ |
| Molecular Weight | 1169.39 |
| T_g | 181 °C |
| 5% wt loss Temp | 555 °C |
| HOMO (eV) | -5.24 eV |
| LUMO (eV) | -2.28 eV |
| λ_{abs} in CH_2Cl_2 | 347 nm |
| λ_{em} in CH_2Cl_2 | 471 nm |
| Φ_{PL} in Toluene | 0.99 |

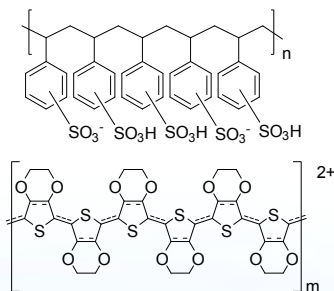
Features

- Novel solution-processed small molecules were designed by linking N-phenyl-1-naphthylamine groups to a phenyl phosphine oxide core. These two compounds exhibited very high thermal stability and high photoluminescent quantum yield.
- Solution-processed non-doped organic light-emitting diodes featuring NP3PPO/NP4PPO as emitter achieve a maximum current efficiency of 1.78/1.84 cdA^{-1} with CIE coordinates of (0.15, 0.11)/(1.15, 0.09) that are very close to the NTSC blue standard.

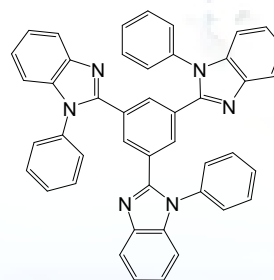
Device Application

ITO/PEDOT:PSS(40nm)/NP3PPO or NP4PPO(40nm)/TPBi(30nm)/LiF(1nm)/Al(100nm)

Related products from Lumtec :



LT-PS001 PEDOT:PSS



LT-E302 TPBi