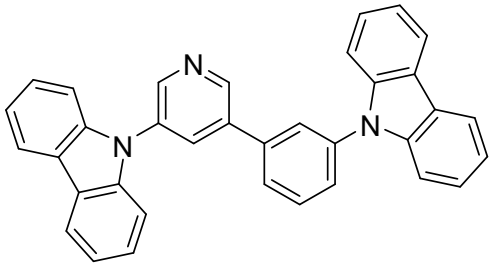
Novel Host/Ligand Material for High Efficiency Green Phosphorescence OLEDs with Codeposited Copper (I) Emitter

Product Specifications

LT-N4094 CPPyC

Formula	$C_{35}H_{23}N_3$
Molecular Weight	485.58 g/mole
Emission	386 nm (film)
T_d	373 °C (5% wt loss)
T_g	97 °C
HOMO (eV)	- 6.0 eV
LUMO (eV)	- 2.3 eV

Reference : Chem. Mater. 2014, 26, 2368−2373



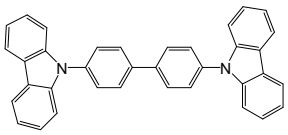
Features

- CPPyC is act as both a good ligand and host matrix in this device, a dimeric copper(I) complex $Cu_2I_2(CPPyC)_4$ is formed by codeposition of CPPyC and copper iodide (CuI) in the thin film, which gives high photoluminescent quantum yields (PLQY)of 100%.
- By using the codeposited film as an EML, a series of simple, highly efficient green-emitting OLEDs were demonstrated. The best OLED showed a maximum EQE as high as about 15.7% (51.6 cd/A), at a luminance of 100 cd/m^2.

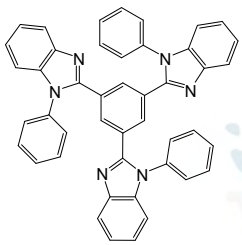
Device Application

ITO/MoO_3(1 nm)/CBP(35 nm)/CuI:CPPyC (4wt %, 18.5 nm)/TPBi(65 nm)/LiF(1m)/Al

Related products from Lumtec :



LT-E409 CBP



LT-E302 TPBi

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