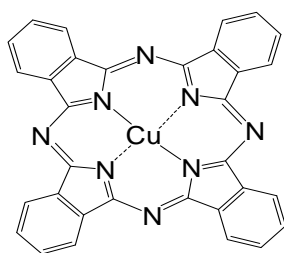


# Hole Injection Layer Materials (HIL)

LT-E201

CuPC

Phthalocyanine, Copper complex

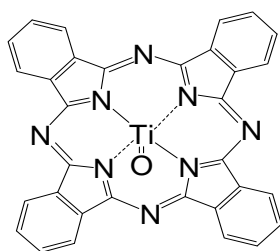


Formula :  $C_{32}H_{16}N_8Cu$   
Molecular Weight : 576.07 g/mole  
Thermal Gravimetric Analysis :  $460^{\circ}C$  (0.5% weight loss)  
Absorption : 345, 631nm (in  $CH_2Cl_2$ )  
Photoluminescence : 404nm (film)

LT-E206

TiOPC

Titanium oxide phthalocyanine

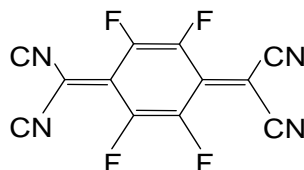


Formula :  $C_{32}H_{16}N_8OTi$   
Molecular Weight : 576.39 g/mole  
Thermal Gravimetric Analysis :  $470^{\circ}C$  (0.5% weight loss)  
Photoluminescence : 392nm (film)

LT-E208

F4-TCNQ

2,3,5,6-Tetrafluoro-7,7,8,8-tetracyano-quinodimethane

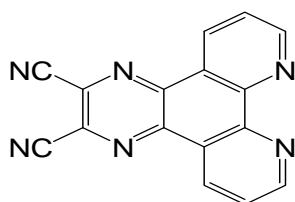


Formula :  $C_{12}F_4N_4$   
Molecular Weight : 276.15 g/mole  
Thermal Gravimetric Analysis :  $230^{\circ}C$  (0.5% weight loss)  
Absorption : 339nm (in THF)  
Photoluminescence : 402nm (in THF)

LT-N211

PPDN

Pyrazino[2,3-f][1,10]phenanthroline-2,3-dicarbonitrile

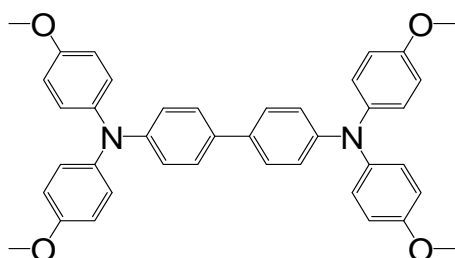


Formula :  $C_{16}H_6N_6$   
Molecular Weight : 282.26 g/mole  
Thermal Gravimetric Analysis :  $290^{\circ}C$  (0.5% weight loss)  
Absorption : 307nm (in  $CH_2Cl_2$ )  
Photoluminescence : 487nm (in  $CH_2Cl_2$ )

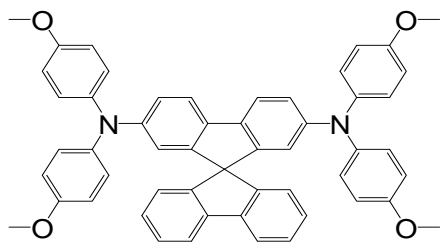
LT-N212

MeO-TPD

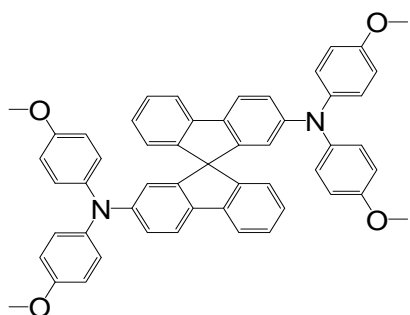
N, N,N',N' -Tetrakis(4-methoxyphenyl)benzidine



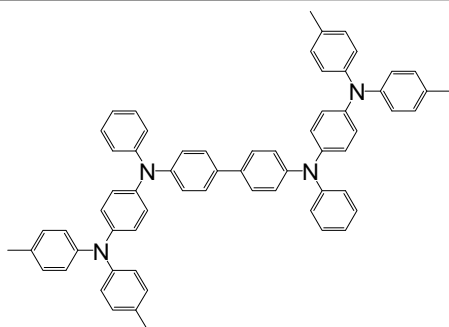
Formula :  $C_{40}H_{36}N_2O_4$   
Molecular Weight : 608.72 g/mole  
Glass Transition Temperature :  $330^{\circ}C$   
Absorption : 302, 351nm (in THF)  
Photoluminescence : 429nm (in THF)  
Reference : 1. *J. Appl. Phys.* 100,064507(2006)  
2. *Synthetic Metals*, 148(2005)205-211.

**LT-N213****MeO-Spiro-TPD****2,7-Bis[N,N-bis(4-methoxy-phenyl)amino]-9,9-spirobifluorene**

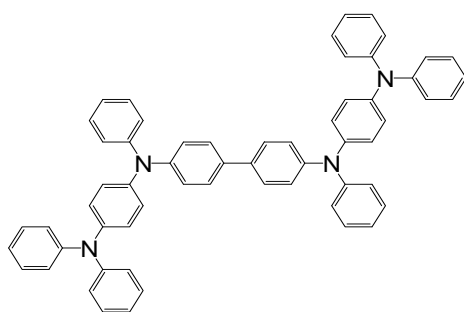
Formula :  $C_{53}H_{42}N_2O_4$   
 Molecular Weight : 770.91 g/mole  
 Glass Transition Temperature : 115°C  
 Thermal Gravimetric Analysis : 360°C (0.5% weight loss)  
 Absorption : 306, 386nm (in THF)  
 Photoluminescence : 428nm (in THF)

**LT-N214****2,2'-MeO-Spiro-TPD****2,2'-Bis[N,N-bis(4-methoxy-phenyl)amino]-9,9-spirobifluorene**

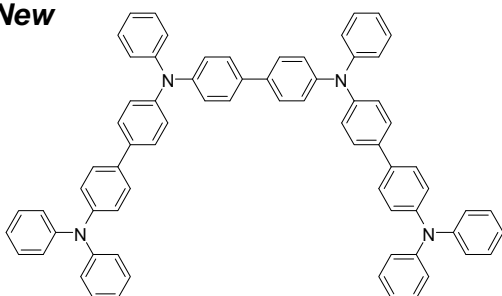
Formula :  $C_{53}H_{42}N_2O_4$   
 Molecular Weight : 770.91 g/mole  
 Glass Transition Temperature : 110°C  
 Thermal Gravimetric Analysis : 380°C (0.5% weight loss)  
 Absorption : 348nm (in  $CH_2Cl_2$ )  
 Photoluminescence : 442nm (in  $CH_2Cl_2$ )

**LT-N215****NTNPB****N,N'-di-phenyl-N,N'-di-[4-(N,N-di-tolyl-amino)phenyl]benzidine**

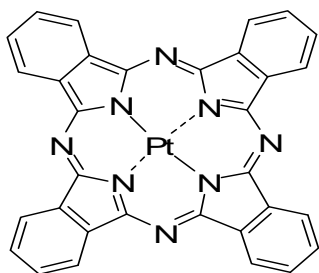
Formula :  $C_{64}H_{54}N_4$   
 Molecular Weight : 879.14 g/mole  
 Glass Transition Temperature : 121°C  
 Thermal Gravimetric Analysis : 380°C (0.5% weight loss)  
 Absorption : 327nm (in THF)  
 Photoluminescence : 458nm (in THF)

**LT-N216****NPNPB****N,N'-di-phenyl-N,N'-di-[4-(N,N-di-phenyl-amino)phenyl]benzidine**

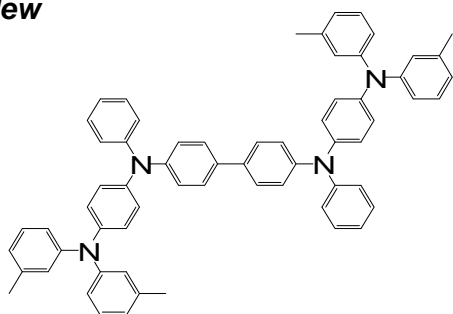
Formula :  $C_{60}H_{46}N_4$   
 Molecular Weight : 823.03 g/mole  
 Thermal Gravimetric Analysis : 400°C (0.5% weight loss)  
 Absorption : 324nm (in THF)  
 Photoluminescence : 451nm (in THF)

**LT-N218****TPT1****N4,N4'-(biphenyl-4,4'-diyl)bis(N4,N4',N4'-triphenylbiphenyl-4,4'-diamine)****New**

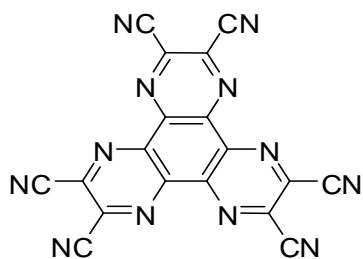
Formula :  $C_{72}H_{54}N_4$   
 Molecular Weight : 975.23 g/mole

**LT-N219****PtPC****Phthalocyanine, Platinum complex****New**

Formula :  $C_{32}H_{16}N_8Pt$   
 Molecular Weight : 707.60 g/mole  
 Thermal Gravimetric Analysis : 495°C (0.5% weight loss)  
 Photoluminescence : 372.5nm (in  $CH_2Cl_2$ )

**LT-N220****DNTPD****N1,N1'-(biphenyl-4,4'-diyl)bis(N1-phenyl-N4,N4-dimethylbenzene-1,4-diamine)****New**

Formula :  $C_{64}H_{54}N_4$   
 Molecular Weight : 879.14 g/mole

**LT-N221****HAT-CN****Dipyrazino[2,3-f:2',3'-h]quinoxaline-2,3,6,7,10,11-hexacarbonitrile****New**

Formula :  $C_{18}N_{12}$   
 Molecular Weight : 384.27 g/mole  
 Thermal Gravimetric Analysis : 430°C (0.5% weight loss)  
 Reference : WO2004054326 (2004)