

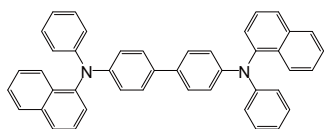
# Organic Light Emitting Diode (OLED)

## Hole Transport Layer / Electron Blocking Layer (HTL/EBL) Materials

### LT-E101 | NPB

*N,N'*-Bis(naphthalen-1-yl)-*N,N'*-bis(phenyl)-benzidine

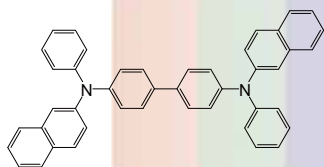
CAS No. : 123847-85-8  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{44}H_{32}N_2$   
M.W. : 588.74 g/mole  
UV : 339 nm (in THF)  
PL : 450 nm (in THF)  
TGA : > 350 °C (0.5% weight loss)



### LT-E102 | $\beta$ -NPB

*N,N'*-Bis(naphthalen-2-yl)-*N,N'*-bis(phenyl)-benzidine

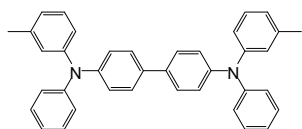
CAS No. : 139255-17-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{44}H_{32}N_2$   
M.W. : 588.74 g/mole  
UV : 349 nm (in THF)  
PL : 416 nm (in THF)  
TGA : > 330 °C (0.5% weight loss)



### LT-E103 | TPD

*N,N'*-Bis(3-methylphenyl)-*N,N'*-bis(phenyl)-benzidine

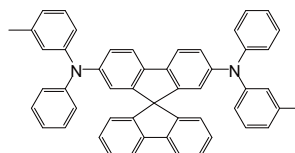
CAS No. : 65181-78-4  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{38}H_{32}N_2$   
M.W. : 516.67 g/mole  
UV : 352 nm (in THF)  
PL : 398 nm (in THF)  
TGA : > 300 °C (0.5% weight loss)



### LT-E105 | Spiro-TPD

*N,N'*-Bis(3-methylphenyl)-*N,N'*-bis(phenyl)-2,7-diamino-9,9-spirobifluorene

CAS No. : 1033035-83-4  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{51}H_{38}N_2$   
M.W. : 678.86 g/mole  
UV : 379 nm (in THF)  
PL : 416 nm (in THF)  
TGA : > 280 °C (0.5% weight loss)



### LT-E106 | Spiro-NPB

*N,N'*-Bis(naphthalen-1-yl)-*N,N'*-bis(phenyl)-2,7-diamino-9,9-spirobifluorene

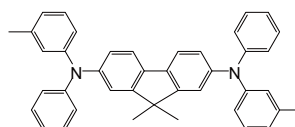
CAS No. : 932739-76-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{57}H_{38}N_2$   
M.W. : 750.93 g/mole  
UV : 380 nm (in THF)  
PL : 453 nm (in THF)  
TGA : > 390 °C (0.5% weight loss)



### LT-E109 | DMFL-TPD

*N,N'*-Bis(3-methylphenyl)-*N,N'*-bis(phenyl)-2,7-diamino-9,9-dimethyl-fluorene

CAS No. : 677350-83-3  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{41}H_{36}N_2$   
M.W. : 556.74 g/mole  
UV : 376 nm (in THF)  
PL : 401 nm (in THF)  
TGA : > 290 °C (0.5% weight loss)



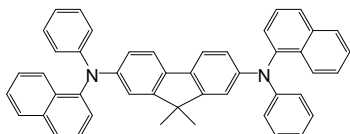
# Organic Light Emitting Diode (OLED)

## Hole Transport Layer / Electron Blocking Layer (HTL/EBL) Materials

### LT-E110 | DMFL-NPB

*N,N'*-Bis(naphthalen-1-yl)-*N,N'*-bis(phenyl)-2,7-diamino-9,9-dimethyl-fluorene

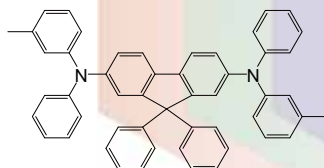
CAS No. : 1229226-27-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{47}H_{36}N_2$   
M.W. : 628.80 g/mole  
UV : 381 nm (in THF)  
PL : 458 nm (in THF)  
TGA : > 330 °C (0.5% weight loss)



### LT-E111 | DPFL-TPD

*N,N'*-Bis(3-methylphenyl)-*N,N'*-bis(phenyl)-2,7-diamino-9,9-diphenyl-fluorene

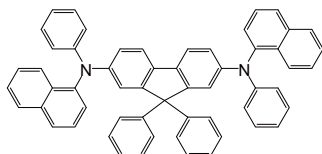
CAS No. : 206886-03-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{51}H_{40}N_2$   
M.W. : 680.88 g/mole  
UV : 381 nm (in THF)  
PL : 410 nm (in THF)  
TGA : > 320 °C (0.5% weight loss)



### LT-E112 | DPFL-NPB

*N,N'*-Bis(naphthalen-1-yl)-*N,N'*-bis(phenyl)-2,7-diamino-9,9-diphenyl-fluorene

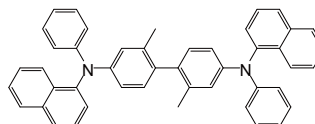
CAS No. : 357645-40-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{57}H_{40}N_2$   
M.W. : 752.94 g/mole  
UV : 371 nm (in THF)  
PL : 466 nm (in THF)  
TGA : > 300 °C (0.5% weight loss)



### LT-E115 | $\alpha$ -NPD

*N,N'*-Bis(naphthalen-1-yl)-*N,N'*-bis(phenyl)-2,2'-dimethylbenzidine

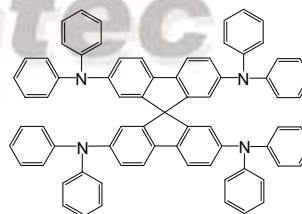
CAS No. : 495416-60-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{46}H_{36}N_2$   
M.W. : 616.79 g/mole  
UV : 307 nm (in THF)  
PL : 447 nm (in THF)  
TGA : > 310 °C (0.5% weight loss)



### LT-E116 | Spiro-TAD

2,2',7,7'-Tetrakis(*N,N*-diphenylamino)-2,7-diamino-9,9-spirobifluorene

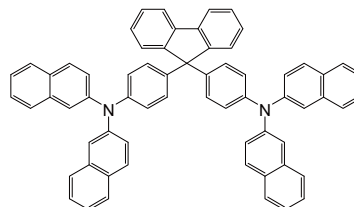
CAS No. : 189363-47-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{73}H_{52}N_4$   
M.W. : 985.22 g/mole  
UV : 378 nm (in THF)  
PL : 415 nm (in THF)  
TGA : > 290 °C (0.5% weight loss)



### LT-N121 | NPAPF

9,9-Bis[4-(*N,N*-bis-naphthalen-2-yl-amino)phenyl]-9H-fluorene

CAS No. : 916061-87-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{65}H_{44}N_2$   
M.W. : 853.06 g/mole  
UV : 322 nm (in THF)  
PL : 418 nm (in THF)  
TGA : > 400 °C (0.5% weight loss)



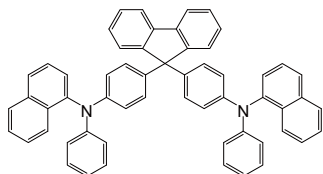
# Organic Light Emitting Diode (OLED)

## Hole Transport Layer / Electron Blocking Layer (HTL/EBL) Materials

### LT-N124 | NPBAF

9,9-Bis[4-(*N*-naphthalen-1-yl-*N*'-phenylamino)-phenyl]-9*H*-fluorene

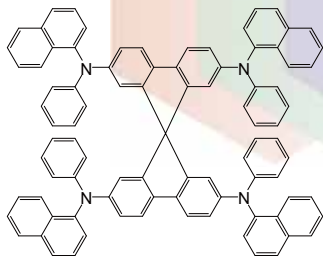
CAS No. : 510775-24-3  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>57</sub>H<sub>40</sub>N<sub>2</sub>  
M.W. : 752.94 g/mole  
UV : 304 nm (in THF)  
PL : 431 nm (in THF)  
TGA : > 320 °C (0.5% weight loss)



### LT-N125 | Spiro-2NPB

2,2',7,7'-Tetrakis[*N*-naphthalenyl(phenyl)-amino]-9,9-spirobifluorene

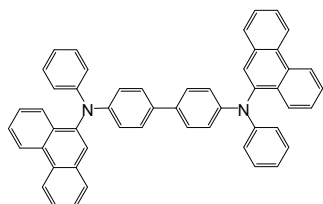
CAS No. : 404001-42-9  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>89</sub>H<sub>60</sub>N<sub>4</sub>  
M.W. : 1185.46 g/mole  
UV : 380 nm (in THF)  
PL : 484 nm (in THF)  
TGA : > 420 °C (0.5% weight loss)



### LT-N131 | PAPB

*N,N'*-Bis(phenanthren-9-yl)-*N,N'*-bis(phenyl)-benzidine

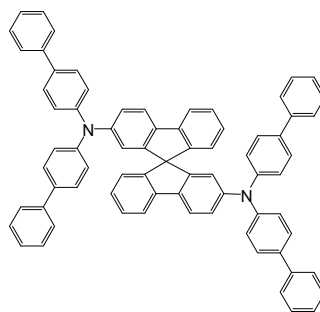
CAS No. : 934000-87-0  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>52</sub>H<sub>36</sub>N<sub>2</sub>  
M.W. : 688.86 g/mole  
UV : 336 nm (in THF)  
PL : 454 nm (in THF)  
TGA : > 410 °C (0.5% weight loss)



### LT-N135 | 2,2'-Spiro-DBP

2,2'-Bis[*N,N'*-bis(biphenyl-4-yl)amino]-9,9-spirobifluorene

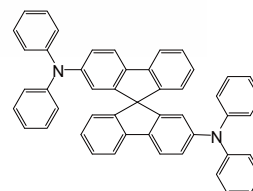
CAS No. : 1174006-39-3  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>73</sub>H<sub>50</sub>N<sub>2</sub>  
M.W. : 955.19 g/mole  
UV : 349 nm (in THF)  
PL : 413 nm (in THF)  
TGA : > 310 °C (0.5% weight loss)



### LT-N136 | Spiro-BPA

2,2'-Bis[*N,N'*-di-phenyl-amino]-9,9-spirobifluorene

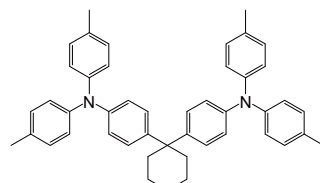
CAS No. : 862664-73-1  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>49</sub>H<sub>34</sub>N<sub>2</sub>  
M.W. : 650.81 g/mole  
UV : 348 nm (in THF)  
PL : 398 nm (in THF)  
TGA : > 310 °C (0.5% weight loss)  
Reference : *Adv. Mater.* 2006, 18, 1216-1220.



### LT-N137 | TAPC

Di-[4-(*N,N'*-di-*p*-tolyl-amino)-phenyl]cyclohexane

CAS No. : 58473-78-2  
Grade : Sublimed, > 99.5% (HPLC)  
Formula : C<sub>46</sub>H<sub>46</sub>N<sub>2</sub>  
M.W. : 626.87 g/mole  
UV : 305 nm (in THF)  
PL : 414 nm (in THF)  
TGA : > 290 °C (0.5% weight loss)  
Reference : *Journal of Applied Physics*, Vol. 95, No.12, 7798

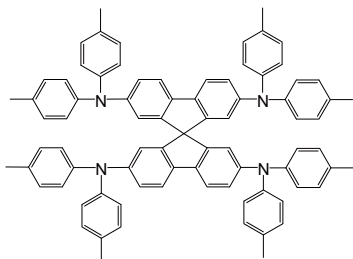


### LT-N138 | Spiro-TTB

2,2',7,7'-Tetra(*N,N*-di-*p*-tolyl)amino-9,9-spirobifluorene

CAS No. : 515834-67-0  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{81}H_{68}N_4$   
 M.W. : 1097.43 g/mole  
 UV : 385 nm (in THF)  
 PL : 418 nm (in THF)  
 TGA : > 360 °C (0.5% weight loss)

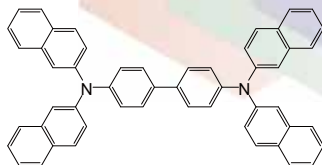
Reference : *Adv. Funct. Mater.* 2006, 16, 966-974.



### LT-N139 | β-TNB

*N,N,N',N'*-Tetra-naphthalen-2-yl-benzidine

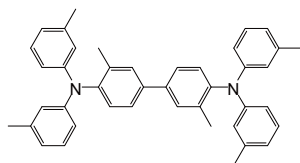
CAS No. : 141752-82-1  
 Grade : Sublimed, > 98% (HPLC)  
 Formula :  $C_{52}H_{36}N_2$   
 M.W. : 688.86 g/mole  
 UV : 354 nm (in THF)  
 PL : 429 nm (in THF)  
 TGA : > 410 °C (0.5% weight loss)



### LT-N140 | HMTPD

*N,N,N',N'*-Tetra-(3-methylphenyl)-3,3'-dimethylbenzidine

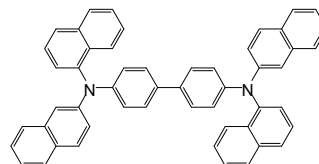
CAS No. : 105465-14-3  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{42}H_{40}N_2$   
 M.W. : 572.78 g/mole  
 UV : 302 nm (in THF)  
 PL : 399 nm (in THF)  
 TGA : > 240 °C (0.5% weight loss)



### LT-N141 | α,β-TNB

*N,N'*-Di(naphthalenyl)-*N,N'*-di(naphthalen-2-yl)-benzidine

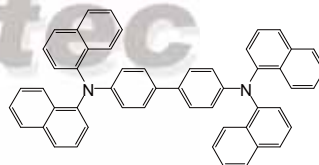
CAS No. : 374592-88-8  
 Grade : Sublimed, > 98% (HPLC)  
 Formula :  $C_{52}H_{36}N_2$   
 M.W. : 688.86 g/mole  
 UV : 345 nm (in  $CH_2Cl_2$ )  
 PL : 462 nm (in  $CH_2Cl_2$ )  
 TGA : > 370 °C (0.5% weight loss)



### LT-N142 | α-TNB

*N,N,N',N'*-Tetra-naphthalenyl-benzidine

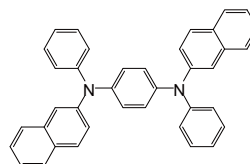
CAS No. : 186256-01-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{52}H_{36}N_2$   
 M.W. : 688.86 g/mole  
 UV : 297,362 nm (in  $CH_2Cl_2$ )  
 PL : 462 nm (in  $CH_2Cl_2$ )  
 TGA : > 360 °C (0.5% weight loss)



### LT-N143 | β-NPP

*N,N'*-Di(naphthalen-2-yl)-*N,N'*-diphenylbenzene-1,4-diamine

CAS No. : 139994-47-1  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{38}H_{28}N_2$   
 M.W. : 512.64 g/mole  
 UV : 323 nm (in THF)  
 PL : 466 nm (in THF)  
 TGA : > 270 °C (0.5% weight loss)



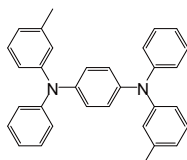
# Organic Light Emitting Diode (OLED)

## Hole Transport Layer / Electron Blocking Layer (HTL/EBL) Materials

### LT-N144 | TTP

*N,N'*-Diphenyl-*N,N'*-di-*m*-tolylbenzene-1,4-diamine

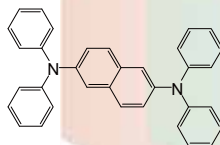
CAS No. : 80223-29-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{32}H_{28}N_2$   
M.W. : 440.58 g/mole  
UV : 314 nm (in  $CH_2Cl_2$ )  
PL : 439 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)



### LT-N145 | NDDP

*N,N',N'',N'''*-Tetraphenyl-naphthalene-2,6-diamine

CAS No. : 111961-87-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{34}H_{26}N_2$   
M.W. : 462.58 g/mole  
UV : 312, 341 nm (in  $CH_2Cl_2$ )  
PL : 438 nm (in  $CH_2Cl_2$ )  
TGA : > 290 °C (0.5% weight loss)

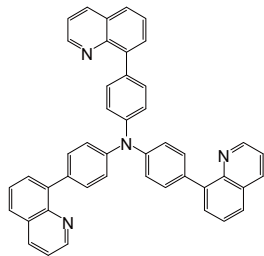


### LT-N146 | TQTPA

Tris(4-(quinolin-8-yl)phenyl)amine

CAS No. : 1142945-07-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{45}H_{30}N_4$   
M.W. : 626.75 g/mole  
UV : 287, 368 nm (in  $CH_2Cl_2$ )  
PL : 431 nm (in  $CH_2Cl_2$ )  
TGA : > 390 °C (0.5% weight loss)

Reference : *Chem. Mater.* 2009, 21, 1284-1287

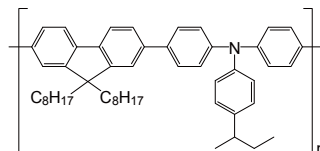


### LT-N148 | TFB

Poly[(9,9-dioctylfluorenyl-2,7-diyl)-co-(4,4'-(*N*-(4-*sec*-butylphenyl) diphenylamine)]

CAS No. : 220797-16-0  
Grade :  $M_w > 30,000$  (GPC)  
Formula :  $(C_{51}H_{61}N)_n$   
UV : 389 nm (in  $CH_2Cl_2$ )  
PL : 443 nm (in  $CH_2Cl_2$ )  
Solubility : Soluble in  $CH_2Cl_2$ , Toluene,  $CHCl_3$

Reference : *Synthetic Metals* 160 (2010) 2393-2396

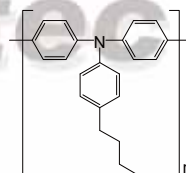


### LT-N149 | Poly-TPD

Poly[*N,N'*-bis(4-butylphenyl)-*N,N'*-bis(phenyl)-benzidine]

CAS No. : 472960-35-3  
Grade :  $M_w > 10,000$  (GPC)  
Formula :  $(C_{22}H_{21}N)_n$   
UV : 371, 388 nm (in  $CH_2Cl_2$ )  
PL : 424 nm (in  $CH_2Cl_2$ )  
Solubility : Soluble in  $CHCl_3$ , Chlorobenzene

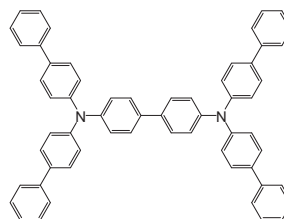
Reference : *J. Mater. Chem.*, 2012, 22, 22769-22773



### LT-N151

*N*<sub>4</sub>,*N*<sub>4</sub>,*N*<sub>4</sub>',*N*<sub>4</sub>'-tetra([1,1'-biphenyl]-4-yl)-[1,1'-biphenyl]-4,4'-diamine

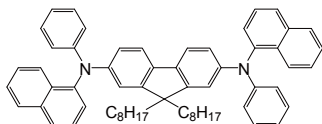
CAS No. : 164724-35-0  
Grade : Sublimed, >99% (HPLC)  
Formula :  $C_{60}H_{44}N_2$   
M.W. : 793 (g/mole)



### LT-N154 | DOFL-NPB

*N,N'*-Di(naphthalen-1-yl)-9,9-dioctyl-*N,N'*-diphenyl-9H-fluorene-2,7-diamine

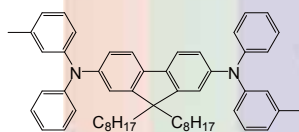
CAS No. : 870197-09-4  
 Grade : > 99% (HPLC)  
 Formula :  $C_{61}H_{64}N_2$   
 M.W. : 825.17 g/mole  
 UV : 382 nm (in THF)  
 PL : 460 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)



### LT-N155 | DOFL-TPD

*N,N'*-Bis(3-methylphenyl)-*N,N'*-bis(phenyl)-9,9-dioctyl-fluorene

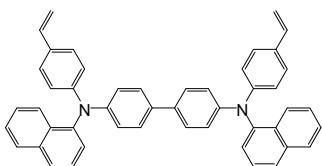
CAS No. : 439942-97-9  
 Grade : > 99% (HPLC)  
 Formula :  $C_{55}H_{64}N_2$   
 M.W. : 753.11 g/mole  
 UV : 376 nm (in THF)  
 PL : 401 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)



### LT-N157 | VNPB

*N,N'*-Di(naphthalen-1-yl)-*N,N'*-bis(4-vinylphenyl)biphenyl-4,4'-diamine

CAS No. : 1010396-31-2  
 Grade : > 95% (HPLC)  
 Formula :  $C_{48}H_{36}N_2$   
 M.W. : 640.81 g/mole  
 UV : 339 nm (in THF)  
 PL : 450 nm (in THF)

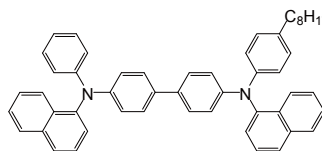


### LT-N158 | ONPB

*N,N'*-Di(naphthalen-1-yl)-*N,N'*-(4-octylphenyl)-*N,N'*-phenylbiphenyl-4,4'-diamine

CAS No. : 1431521-16-2  
 Grade : > 99% (HPLC)  
 Formula :  $C_{52}H_{48}N_2$   
 M.W. : 700.95 g/mole  
 UV : 347 nm (film)  
 PL : 439 nm (film)  
 TGA : > 300 °C (0.5% weight loss)

Reference : *Journal of Photopolymer Science and Technology, Vol. 25, 3(2012) 335-339*

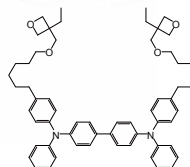


### LT-N159 | OTPD

*N,N'*-Bis(4-(6-((3-ethyloxetan-3-yl)methoxy)hexyl)phenyl)-*N,N'*-diphenylbiphenyl-4,4'-diamine

CAS No. : 746634-00-4  
 Grade : > 99% (HPLC)  
 Formula :  $C_{60}H_{72}N_2O_4$   
 M.W. : 885.22 g/mole  
 UV : 308, 353 nm (in  $CH_2Cl_2$ )  
 PL : 410 nm (in  $CH_2Cl_2$ )

Reference : 1. *Adv. Mater.* 2006, 18, 948-954  
 2. *Appl. Phys. Lett.* 91, 103507(2007)

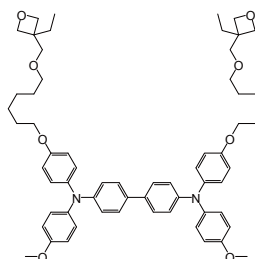


### LT-N160 | QUPD

*N,N'*-Bis(4-(6-((3-ethyloxetan-3-yl)methoxy)hexyloxy)phenyl)-*N,N'*-bis(4-methoxyphenyl)biphenyl-4,4'-diamine

CAS No. : 864130-79-0  
 Grade : > 99% (HPLC)  
 Formula :  $C_{62}H_{76}N_2O_8$   
 M.W. : 945.28 g/mole  
 UV : 353 nm (in  $CH_2Cl_2$ )  
 PL : 439 nm (in  $CH_2Cl_2$ )

Reference : 1. *Adv. Mater.* 2006, 18, 948-954  
 2. *Appl. Phys. Lett.* 91, 103507(2007)



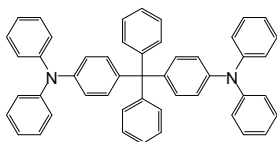
# Organic Light Emitting Diode (OLED)

## Hole Transport Layer / Electron Blocking Layer (HTL/EBL) Materials

### LT-N162 | TCBPA

4,4'-(Diphenylmethylene)bis(*N,N*-diphenylaniline)

CAS No. : 1459723-98-8  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{49}H_{38}N_2$   
M.W. : 654.84 g/mole  
UV : 303 nm (in  $CH_2Cl_2$ )  
PL : 374 nm (in  $CH_2Cl_2$ )  
TGA : > 320 °C (0.5% weight loss)

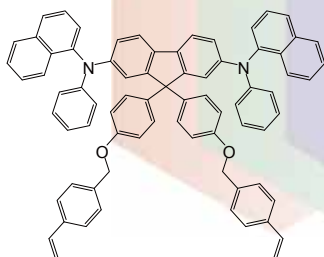


### LT-N164 | VB-FNPD

9,9-Bis[4-[(4-ethenylphenyl)methoxy]phenyl]-*N,N'*-di-1-naphthalenyl-*N,N'*-diphenyl-9*H*-fluorene-2,7-diamine

CAS No. : 1173170-48-3  
Grade : > 95% (HPLC)  
Formula :  $C_{75}H_{56}N_2O_2$   
M.W. : 1017.26 g/mole  
UV : 356 nm (in  $CH_2Cl_2$ )  
PL : 467 nm (in  $CH_2Cl_2$ )

Reference : *J. Mater. Chem.*, 2009, 19, 3618-3623

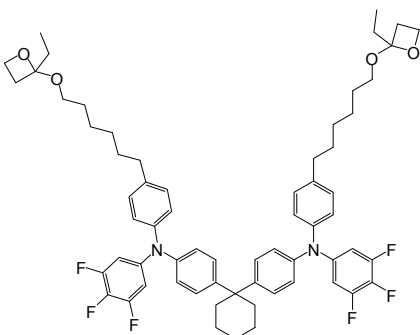


### LT-N165 | X-F6-TAPC

*N,N'*-(4,4'-(Cyclohexane-1,1-diyl)bis(4,1-phenylene))bis(*N*-(4-(6-(2-ethyloxetan-2-yloxy)hexyl)phenyl)-3,4,5-trifluoroaniline)

Grade : > 99% (HPLC)  
Formula :  $C_{64}H_{72}F_6N_2O_4$   
M.W. : 1047.26 g/mole  
UV : 300 nm (in  $CH_2Cl_2$ )

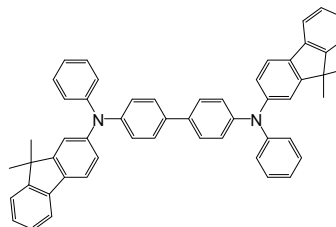
Reference : *Adv. Funct. Mater.* 2013, 23, 359-365



### LT-N1002 | BF-DPB

*N,N'*-Bis(9,9-dimethyl-9*H*-fluorene-2-yl)-*N,N'*-diphenylbiphenyl-4,4'-diamine

CAS No. : 361486-60-4  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{54}H_{44}N_2$   
M.W. : 720.94 g/mole  
UV : 365 nm (in  $CH_2Cl_2$ )  
PL : 418 nm (in  $CH_2Cl_2$ )  
TGA : > 250 °C (0.5% weight loss)

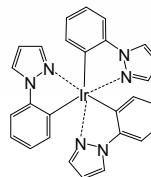


### LT-N002 | Ir(ppz)<sub>3</sub>

Tris(phenylpyrazole)iridium

CAS No. : 562824-31-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{27}H_{21}N_6Ir$   
M.W. : 621.71 g/mole  
UV : 242, 320 nm (in THF)  
PL : 423 nm (in THF)  
TGA : > 270 °C (0.5% weight loss)

Reference : 1. *Applied Physics Letters*, 86, 263502 (2005)  
2. *Advanced Materials*, Volume 16, (2004)





### LT-N177 | PFN-OX

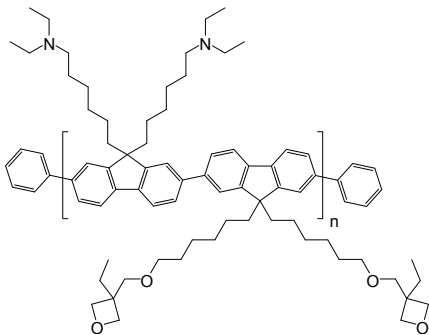
6,6'-(9',9'-Bis(6-((3-ethoxyhexan-3-yl)methoxy)hexyl)-7,7'-diphenyl-9H,9'H-2,2'-bifluorene-9,9'-diyl)bis(N,N-diethylhexan-1-amine)

CAS No. : 1345045-27-3

Grade :  $M_w > 20,000$  (GPC)

Formula :  $(C_{70}H_{102}N_2O_4)_n C_{12}H_{10}$

Reference : *J. Mater. Chem. C*, 2014,2, 3270-3277



### LT-N178 | TBA

Tri(biphenyl-4-yl)amine

CAS No. : 6543-20-0

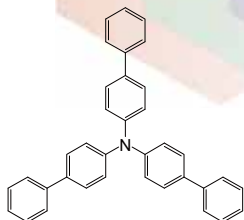
Grade : > 99% (HPLC)

Formula :  $C_{36}H_{27}N$

M.W. : 473.61 g/mole

TGA : > 150 °C (0.5% weight loss)

Reference : *Australian Journal of Chemistry* (2009), 62(5), 483-492



### LT-N180 | Spiro-mTTB

2,2',7,7'-Octa(m-tolylamine)-9,9'-spirobifluorene

CAS No. : 302344-41-8

Grade : > 99% (HPLC)

Formula :  $C_{61}H_{68}N_4$

M.W. : 1097.43 g/mole

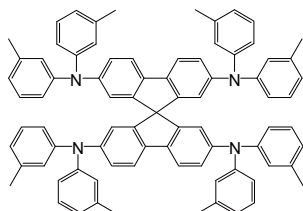
UV : 378 nm (in THF)

PL : 415 nm (in THF)

TGA : > 220 °C (0.5% weight loss)

Reference : 1. *J. Appl. Phys.* 100,064507(2006)

2. *Synthetic Metals*, 148(2005)205-211



### LT-N181 | PFNIBT

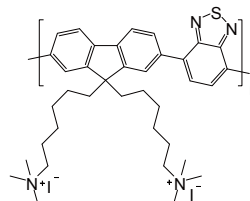
Poly(9,9-bis(6-trimethyl ammoniumiodide)-hexyl-fluorene-2,7-diyl-*alt*(benzo[2,1,3]thiadiazol-4,7-diyl))

Grade :  $M_w > 20,000$  (GPC)

Formula :  $(C_{37}H_{50}I_2N_4S)_n$

M.W. : 670.91 g/mole

Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



### LT-N182 | TSBPA

4,4'-(Diphenylsilanediyl)bis(N,N-diphenylamine)

CAS No. : 205327-13-5

Grade : > 99% (HPLC)

Formula :  $C_{48}H_{38}N_2Si$

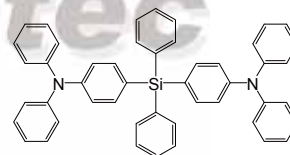
M.W. : 670.91 g/mole

UV : 309 nm (in  $CH_2Cl_2$ )

PL : 376 nm (in  $CH_2Cl_2$ )

TGA : > 180 °C (0.5% weight loss)

Reference : *Synthetic Metals* (2013), 167, 1-4



### LT-N183 | DTAF

4,4'-(9H-fluorene-9-ylidene)bis[N,N-bis(4-methylphenyl)benzenamine]

CAS No. : 159526-57-5

Grade : Sublimed, > 99% (HPLC)

Formula :  $C_{53}H_{44}N_2$

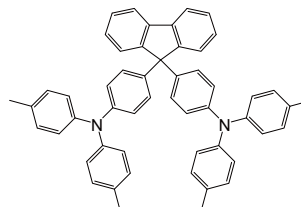
M.W. : 708.93 g/mole

UV : 304 nm (in THF)

PL : 431 nm (in THF)

TGA : > 300 °C (0.5% weight loss)

Reference : *Dalton Transactions* (2015), 44(33), 14613-14624





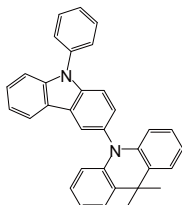
# Organic Light Emitting Diode (OLED)

## Hole Transport Layer / Electron Blocking Layer (HTL/EBL) Materials

### LT-N184 | PCZAC

9,10-Dihydro-9,9-dimethyl-10-(9-phenyl-9H-carbazol-3-yl)-acridine

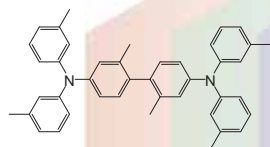
CAS No. : 1705584-08-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{33}H_{26}N_2$   
M.W. : 450.57 g/mole



### LT-N186 | 2,2'-HMTDP

2,2'-Dimethyl-N4,N4,N4',N4'-tetram-tolylbiphenyl-4,4'-diamine

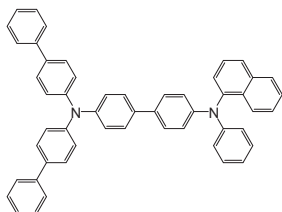
CAS No. : 80730-98-9  
Grade : Sublimed, >99% (HPLC)  
Formula :  $C_{42}H_{40}N_2$   
M.W. : 572.78 (g/mole)



### LT-N187

N4,N4-di(biphenyl-4-yl)-N4'-(naphthalen-1-yl)-N4'-phenyl-biphenyl-4,4'-diamine

CAS No. : 897671-42-0  
Grade : Sublimed, >99% (HPLC)  
Formula :  $C_{52}H_{38}N_2$   
M.W. : 690.87 (g/mole)

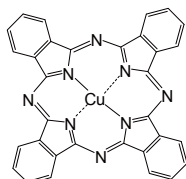


Lumtec

### LT-E201 | CuPC

Copper(II) phthalocyanine

CAS No. : 147-14-8  
 Grade : Sublimed, > 99%  
 Formula :  $C_{24}H_{16}N_8Cu$   
 M.W. : 576.07 g/mole  
 UV : 345, 631 nm (in  $CH_2Cl_2$ )  
 PL : 404 nm (film)  
 TGA : > 430 °C (0.5% weight loss)

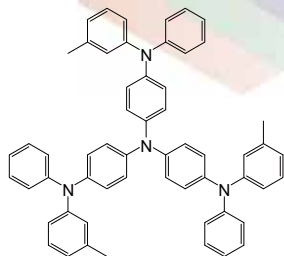


### LT-E202 | m-MTDATA

4,4',4'' -Tris(*N*-3-methylphenyl-*N*-phenyl-amino) triphenylamine

CAS No. : 124729-98-2  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{57}H_{48}N_4$   
 M.W. : 789.02 g/mole  
 UV : 312, 342 nm (in THF)  
 PL : 425 nm (in THF)  
 TGA : > 350 °C (0.5% weight loss)

Reference : 1. *Journal of Nanoscience and Nanotechnology* (2014), 14(8), 6404-6408  
 2. *Applied Mechanics and Materials* (2014), 536-537

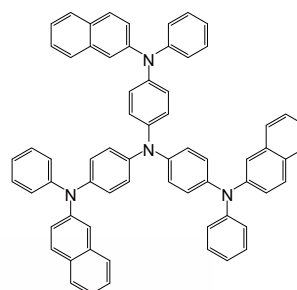


### LT-E203 | 2T-NATA

4,4',4'' -Tris(*N*-(naphthalen-2-yl)-*N*-phenyl-amino) triphenylamine

CAS No. : 185690-41-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{66}H_{48}N_4$   
 M.W. : 897.11 g/mole  
 UV : 326 nm (in THF)  
 PL : 490 nm (in THF)  
 TGA : > 350 °C (0.5% weight loss)

Reference : 1. *Journal of Nanoscience and Nanotechnology* (2014), 14(8), 6404-6408  
 2. *Synthetic Metals* (2015), 203, 174-179

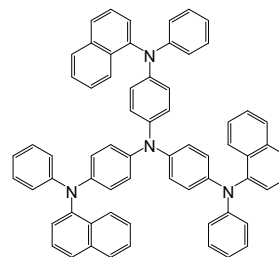


### LT-E204 | 1T-NATA

4,4',4'' -Tris(*N*-(naphthalen-1-yl)-*N*-phenyl-amino) triphenylamine

CAS No. : 185690-39-5  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{66}H_{48}N_4$   
 M.W. : 897.11 g/mole  
 UV : 339 nm (in THF)  
 PL : 518 nm (in THF)  
 TGA : > 350 °C (0.5% weight loss)

Reference : 1. *Advanced Materials* (Weinheim, Germany) (2014), 26(6), 878-885  
 2. *Organic Electronics* (2010), 11(4), 564-572



# Organic Light Emitting Diode (OLED)

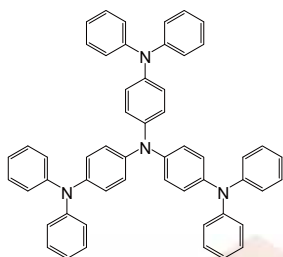
## Hole Injection Layer(HIL) Materials

### LT-E205 | NATA

4,4',4'' -Tris(*N,N*-diphenyl-amino)triphenylamine

CAS No. : 105389-36-4  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{54}H_{42}N_4$   
M.W. : 746.94 g/mole  
UV : 341 nm (in THF)  
PL : 424 nm (in THF)  
TGA : > 350 °C (0.5% weight loss)

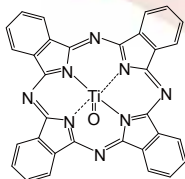
Reference : 1. *Applied Physics Letters* (2004), 85(21), 4848-4850  
2. *Advanced Functional Materials* (2001), 11(4), 310-314



### LT-E206 | TiOPC

Titanium(IV) oxide phthalocyanine

CAS No. : 26201-32-1  
Grade : Sublimed, > 99%  
Formula :  $C_{32}H_{16}N_8OTi$   
M.W. : 576.39 g/mole  
UV : 349, 689 nm (in  $CH_2Cl_2$ )  
PL : 392 nm (in film)  
TGA : > 440 °C (0.5% weight loss)

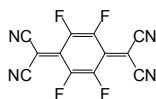


### LT-E208 | F4-TCNQ

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

CAS No. : 29261-33-4  
Grade : Sublimed, > 99%  
Formula :  $C_{12}F_4N_4$   
M.W. : 276.15 g/mole  
UV : 339 nm (in THF)  
PL : 402 nm (in THF)  
TGA : > 210 °C (0.5% weight loss)

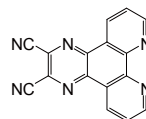
Reference : *J. Appl. Phys.* 103, 043105(2008)



### LT-N211 | PPDN

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

CAS No. : 215611-93-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{16}H_6N_6$   
M.W. : 282.26 g/mole  
UV : 307 nm (in  $CH_2Cl_2$ )  
PL : 487 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)

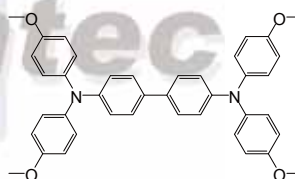


### LT-N212 | MeO-TPD

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

CAS No. : 122738-21-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{40}H_{36}N_2O_4$   
M.W. : 608.72 g/mole  
UV : 302, 351 nm (in THF)  
PL : 429 nm (in THF)  
TGA : > 300 °C (0.5% weight loss)

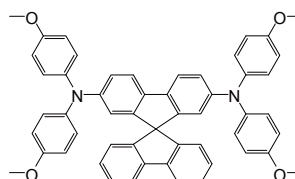
Reference : 1. *J. Appl. Phys.* 100, 064507(2006)  
2. *Synthetic Metals*, 148(2005)205-211



### LT-N213 | MeO-Spiro-TPD

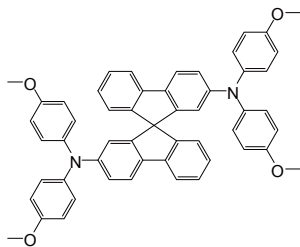
2,7-Bis[*N,N*-bis(4-methoxy-phenyl)amino]-9,9-spirobifluorene

CAS No. : 1138220-69-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{53}H_{42}N_2O_4$   
M.W. : 770.91 g/mole  
UV : 306, 386 nm (in THF)  
PL : 428 nm (in THF)  
TGA : > 330 °C (0.5% weight loss)

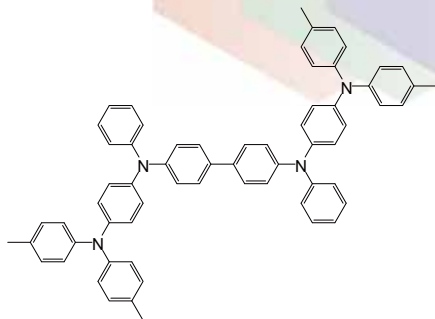


**LT-N214** | 2,2'-MeO-Spiro-TPD2,2'-Bis[*N,N*-bis(4-methoxy-phenyl)amino]-9,9-spirobifluorene

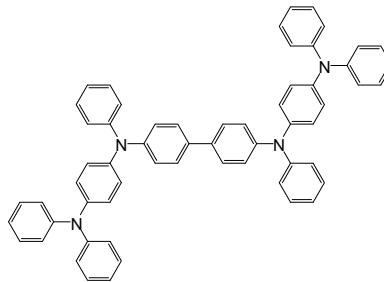
CAS No.	: 1174006-40-6
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>53</sub> H <sub>42</sub> N <sub>2</sub> O <sub>4</sub>
M.W.	: 770.91 g/mole
UV	: 348 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 442 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 350 °C (0.5% weight loss)

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

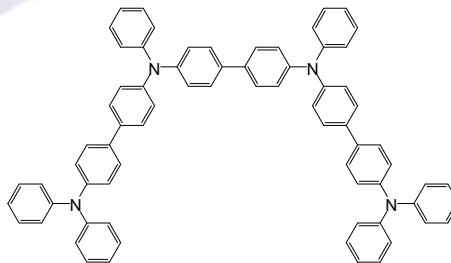
CAS No.	: 1394130-64-3
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>64</sub> H <sub>54</sub> N <sub>4</sub>
M.W.	: 879.14 g/mole
UV	: 327 nm (in THF)
PL	: 458 nm (in THF)
TGA	: > 350 °C (0.5% weight loss)

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

CAS No.	: 936355-01-0
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>60</sub> H <sub>46</sub> N <sub>4</sub>
M.W.	: 823.03 g/mole
UV	: 324 nm (in THF)
PL	: 451 nm (in THF)
TGA	: > 370 °C (0.5% weight loss)

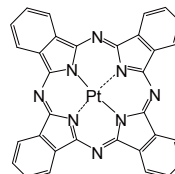
**LT-N218** | TPT1*N,N'*-(Biphenyl-4,4'-diyl)bis(*N,N'*,*N,N'*-triphenylbiphenyl-4,4'-diamine)

CAS No.	: 167218-46-4
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>72</sub> H <sub>54</sub> N <sub>4</sub>
M.W.	: 975.23 g/mole
UV	: 394 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 419 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 370 °C (0.5% weight loss)

**LT-N219** | PtPC

Platinum(II) phthalocyanine

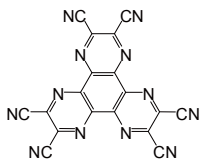
CAS No.	: 14075-08-2
Grade	: Sublimed, > 99%
Formula	: C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Pt
M.W.	: 707.60 g/mole
UV	: 228, 270 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 372.5 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 460 °C (0.5% weight loss)



## LT-N221 | HAT-CN

Dipyrazino[2,3-*f*:2',3'-*b'*]quinoxaline-2,3,6,7,10,11-hexacarbonitrile

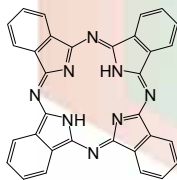
CAS No. : 105598-27-4  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{18}N_{12}$   
 M.W. : 384.27 g/mole  
 UV : 282, 321 nm (in  $CH_2Cl_2$ )  
 PL : 422 nm (in  $CH_2Cl_2$ )  
 TGA : > 400 °C (0.5% weight loss)

Reference : *J. Mater. Chem. C*, 2013, 1, 3967–3975

## LT-N222 | H2PC

Phthalocyanine

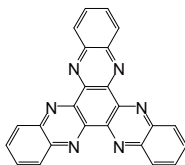
CAS No. : 574-93-6  
 Grade : Sublimed product  
 Formula :  $C_{32}H_{18}N_8$   
 M.W. : 514.54 g/mole  
 UV : 693 nm (in  $C_6H_6$ )  
 PL : 699 nm (in  $C_6H_6$ )



## LT-N224 | HATNA

Diquinoxalino[2,3-*a*:2',3'-*c'*]phenazine

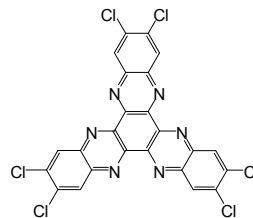
CAS No. : 214-83-5  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{24}H_{12}N_6$   
 M.W. : 384.39 g/mole  
 UV : 295, 378 nm (in  $CH_2Cl_2$ )  
 PL : 594 nm (in  $CH_2Cl_2$ )  
 TGA : > 340 °C (0.5% weight loss)

Reference : *Chem. Eur. J.* 2007, 13, 3537 – 3547

## LT-N225 | HATNA-Cl6

2,3,8,9,14,15-Hexachlorodiquinoxalino[2,3-*a*:2',3'-*c'*]phenazine

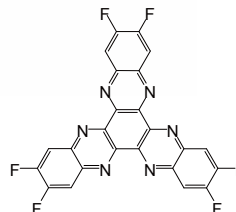
CAS No. : 389121-44-2  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{24}H_6N_6Cl_6$   
 M.W. : 591.06 g/mole  
 UV : 305 nm (in  $CH_2Cl_2$ )  
 PL : 425 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)

Reference : *Chem. Eur. J.* 2007, 13, 3537 – 3547

## LT-N226 | HATNA-F6

2,3,8,9,14,15-Hexafluorodiquinoxalino[2,3-*a*:2',3'-*c'*]phenazine

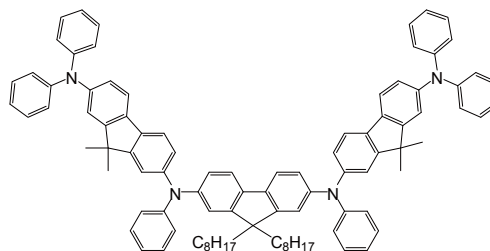
CAS No. : 872140-95-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{24}H_6N_6F_6$   
 M.W. : 492.34 g/mole  
 UV : 285 nm (in  $CH_2Cl_2$ )  
 PL : 427 nm (in  $CH_2Cl_2$ )

Reference : *Chem. Eur. J.* 2007, 13, 3537 – 3547

## LT-N260 | 3FTPD-C8

*N,N'*-(9,9-Dioctyl-9H-fluorene-2,7-diyl)bis(9,9-dimethyl-*N,N'*-triphenyl-9H-fluorene-2,7-diamine)

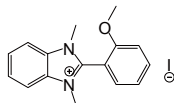
Grade : > 97% (HPLC)  
 Formula :  $C_{95}H_{94}N_4$   
 M.W. : 1291.79 g/mole  
 UV : 378 nm (in  $CH_2Cl_2$ )  
 PL : 426 nm (in  $CH_2Cl_2$ )



### LT-N261 | MeOPBI

2-(2-Methoxyphenyl)-1,3-dimethyl-1*H*-benzimidazol-3-ium iodide

Grade : > 99%  
 Formula : C<sub>16</sub>H<sub>17</sub>IN<sub>2</sub>O  
 M.W. : 380.22 g/mole

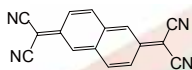


### LT-N262 | TNAP

2,2'-(Naphthalene-2,6-diylidene)dimalononitrile

CAS No. : 6251-01-0  
 Grade : > 99%  
 Formula : C<sub>16</sub>H<sub>6</sub>N<sub>4</sub>  
 M.W. : 254.25 g/mole  
 TGA : > 150 °C (0.5% weight loss)

Reference : *Journal of Physical Chemistry C* (2014), 118(10), 5284-5293

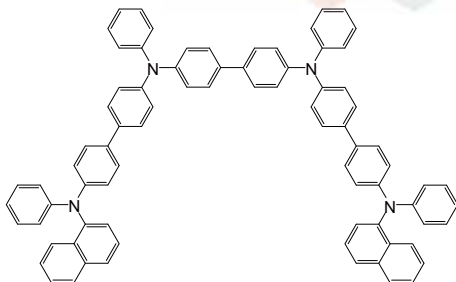


### LT-N2001 | Di-NPB

*N,N'*-(Biphenyl-4,4'-diyl)bis(*N'*-(naphthalen-1-yl)-*N''*-diphenylbiphenyl-4,4'-diamine)

CAS No. : 292827-46-4  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>80</sub>H<sub>58</sub>N<sub>4</sub>  
 M.W. : 1075.34 g/mole  
 TGA : > 300 °C (0.5% weight loss)

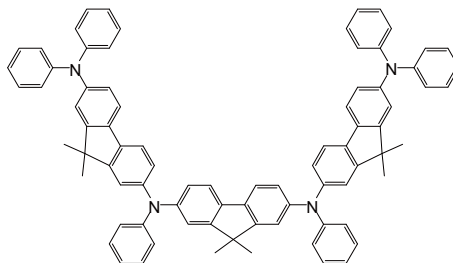
Reference : *Adv. Funct. Mater.* 2012, 22,(2),405-414



### LT-N2002 | 3DMFL-BPA

*N,N'*-(9,9-Dimethyl-9*H*-fluorene-2,7-diyl)bis(9,9-dimethyl-*N,N',N'*-triphenyl-9*H*-fluorene-2,7-diamine)

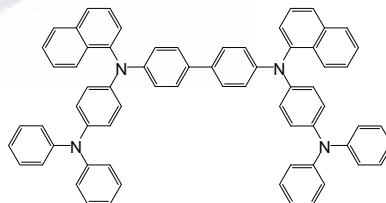
CAS No. : 354987-71-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>81</sub>H<sub>66</sub>N<sub>4</sub>  
 M.W. : 1095.42 g/mole  
 UV : 378 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 426 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 300 °C (0.5% weight loss)



### LT-N2003 | NPB-DPA

*N,N'*-(Biphenyl-4,4'-diyl)bis(*N'*-(naphthalen-1-yl)-*N''*-diphenylbenzene-1,4-diamine)

CAS No. : 910058-11-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>68</sub>H<sub>50</sub>N<sub>4</sub>  
 M.W. : 923.15 g/mole  
 UV : 311, 355 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 516 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 300 °C (0.5% weight loss)



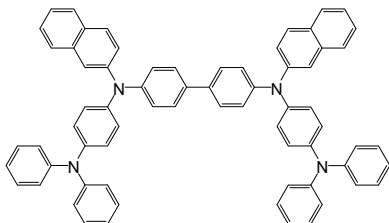
# Organic Light Emitting Diode (OLED)

## Hole Injection Layer(HIL) Materials

### LT-N2004 | $\beta$ -NPB-DPA

*N,N'*-(Biphenyl-4,4'-diyl)bis(*N'*-(naphthalen-2-yl)-*N,N'*-diphenylbenzene-1,4-diamine)

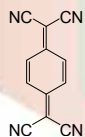
CAS No. : 1207378-72-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{68}H_{50}N_4$   
M.W. : 923.15 g/mole  
UV : 311, 355 nm (in  $CH_2Cl_2$ )  
PL : 516 nm (in  $CH_2Cl_2$ )  
TGA : > 300 °C (0.5% weight loss)



### LT-S973 | TCNQ

7,7,8,8-Tetracyanoquinodimethane

CAS No. : 1518-16-7  
Grade : Sublimed, > 99%  
Formula :  $C_{12}H_4N_4$   
M.W. : 204.19 g/mole  
UV : 259, 404 nm (in  $CH_2Cl_2$ )  
TGA : > 210 °C (0.5% weight loss)



Lumtec



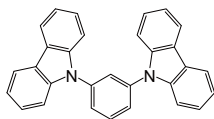
# Organic Light Emitting Diode (OLED)

## Phosphorescent Host Materials

### LT-E107 | MCP

1,3-Bis(carbazol-9-yl)benzene

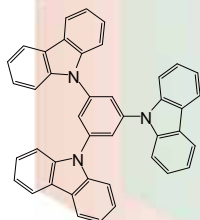
CAS No. : 550378-78-4  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{30}H_{20}N_2$   
M.W. : 408.49 g/mole  
UV : 292, 338 nm (in THF)  
PL : 360 nm (in THF)  
TGA : > 250 °C (0.5% weight loss)



### LT-E108 | TCP

1,3,5-Tris(carbazol-9-yl)benzene

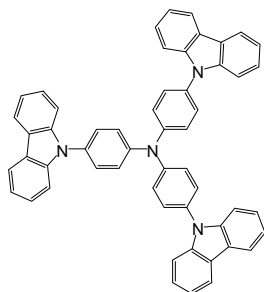
CAS No. : 148044-07-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{42}H_{27}N_3$   
M.W. : 573.68 g/mole  
UV : 292, 337 nm (in THF)  
PL : 358 nm (in THF)  
TGA : > 310 °C (0.5% weight loss)



### LT-E207 | TcTa

4,4',4''-Tris(carbazol-9-yl)triphenylamine

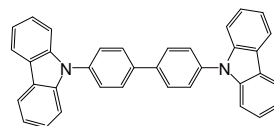
CAS No. : 139092-78-7  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{54}H_{36}N_4$   
M.W. : 740.89 g/mole  
UV : 293, 326 nm (in THF)  
PL : 385 nm (in THF)  
TGA : > 410 °C (0.5% weight loss)  
Reference : *Physical Chemistry Chemical Physics* (2013),  
15(38), 15850-15855.



### LT-E409 | CBP

4,4'-Bis(carbazol-9-yl)biphenyl

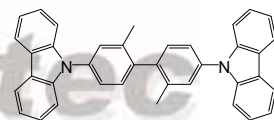
CAS No. : 58328-31-7  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{36}H_{24}N_2$   
M.W. : 484.59 g/mole  
UV : 292, 318 nm (in THF)  
PL : 369 nm (in THF)  
TGA : > 320 °C (0.5% weight loss)



### LT-E414 | CDBP

4,4'-Bis(carbazol-9-yl)-2,2'-dimethylbiphenyl

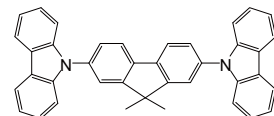
CAS No. : 120260-01-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{38}H_{28}N_2$   
M.W. : 512.64 g/mole  
UV : 292, 340 nm (in THF)  
PL : 349, 364 nm (in THF)  
TGA : > 280 °C (0.5% weight loss)



### LT-N415 | DMFL-CBP

2,7-Bis(carbazol-9-yl)-9,9-dimethylfluorene

CAS No. : 226958-06-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{39}H_{28}N_2$   
M.W. : 524.65 g/mole  
UV : 293, 341 nm (in THF)  
PL : 363 nm (in THF)  
TGA : > 330 °C (0.5% weight loss)



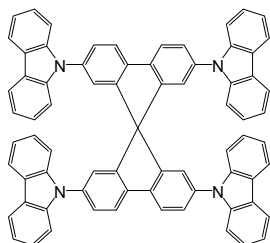
# Organic Light Emitting Diode (OLED)

## Phosphorescent Host Materials

### LT-N416 | Spiro-CBP

2,2',7,7'-Tetrakis(carbazol-9-yl)-9,9-spirobifluorene

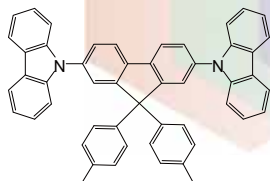
CAS No. : 214078-86-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{23}H_{44}N_4$   
M.W. : 377.16 g/mole  
UV : 292, 342 nm (in THF)  
PL : 370 nm (in THF)  
TGA : > 480 °C (0.5% weight loss)



### LT-N418 | DPFL-CBP

2,7-Bis(carbazol-9-yl)-9,9-ditolylfluorene

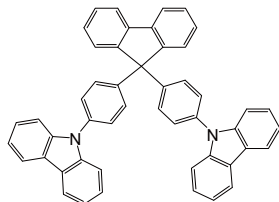
CAS No. : 1174006-50-8  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{51}H_{36}N_2$   
M.W. : 676.84 g/mole  
UV : 293, 344 nm (in THF)  
PL : 367 nm (in THF)  
TGA : > 330 °C (0.5% weight loss)



### LT-N419 | FL-2CBP

9,9-Bis[4-(carbazol-9-yl)-phenyl]fluorene

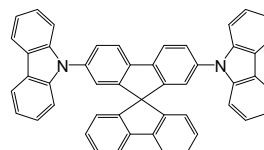
CAS No. : 1431945-64-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{49}H_{32}N_2$   
M.W. : 648.79 g/mole  
UV : 292, 340 nm (in THF)  
PL : 364 nm (in THF)  
TGA : > 370 °C (0.5% weight loss)



### LT-N420 | Spiro-2CBP

2,7-Bis(carbazol-9-yl)-9,9-spirobifluorene

CAS No. : 924899-38-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{49}H_{36}N_2$   
M.W. : 646.78 g/mole  
UV : 293,343 nm (in THF)  
PL : 367 nm (in THF)  
TGA : > 360 °C (0.5% weight loss)

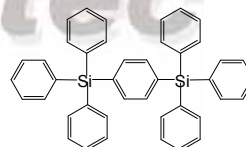


### LT-N448 | UGH-2

1,4-Bis(triphenylsilyl)benzene

CAS No. : 40491-34-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{42}H_{34}Si_2$   
M.W. : 594.89 g/mole  
UV : 265 nm (in  $CH_2Cl_2$ )  
PL : 296 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)

Reference : 1. *Applied Physics Letters*, 86, 263502 (2005)  
2. *Chem. Mater.* 2004, 16, 4743-4747

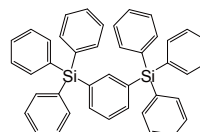


### LT-N449 | UGH-3

1,3-Bis(triphenylsilyl)benzene

CAS No. : 18920-16-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{42}H_{34}Si_2$   
M.W. : 594.89 g/mole  
UV : 265 nm (in THF)  
PL : 301, 418 nm (in THF)  
TGA : > 270 °C (0.5% weight loss)

Reference : *Chem. Mater.* 2004, 16, 4743-4747

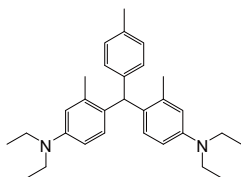


### LT-N450 | MPMP

Bis(4-*N,N*-diethylamino-2-methylphenyl)-4-methylphenylmethane

CAS No. : 70895-80-6  
 Grade : > 99% (HPLC)  
 Formula :  $C_{30}H_{40}N_2$   
 M.W. : 428.65 g/mole  
 UV : 272, 309 nm (in THF)  
 PL : 349 nm (in THF)  
 TGA : > 190 °C (0.5% weight loss)

Reference : 1. *Appl. Phys. Lett. Vol. 85, No. 21, 22 November 2004*  
 2. *Appl. Phys. Lett. 87, 193501 (2005)*

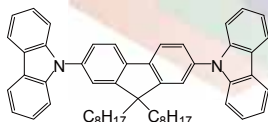


### LT-N451 | DOFL-CBP

2,7-Bis(carbazol-9-yl)-9,9-dioctylfluorene

CAS No. : 848900-30-1  
 Grade : > 99% (HPLC)  
 Formula :  $C_{53}H_{56}N_2$   
 M.W. : 721.03 g/mole  
 UV : 292, 340 nm (in THF)  
 PL : 362 nm (in THF)  
 TGA : > 310 °C (0.5% weight loss)

Reference : *Chem. Mater. 2004, 16, 4743-4747*

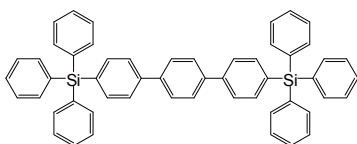


### LT-N482 | BST

4,4''-Di(triphenylsilyl)-*p*-terphenyl

CAS No. : 1046146-39-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{54}H_{42}Si_2$   
 M.W. : 747.08 g/mole  
 UV : 296 nm (in  $CH_2Cl_2$ )  
 PL : 358 nm (in  $CH_2Cl_2$ )  
 TGA : > 360 °C (0.5% weight loss)

Reference : *Adv. Funct. Mater. 2008, 18, 485*

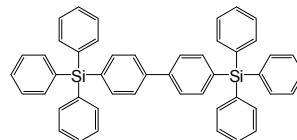


### LT-N483 | BSB

4,4'-Di(triphenylsilyl)-biphenyl

CAS No. : 18826-13-6  
 Grade : Sublimed, > 99%  
 Formula :  $C_{48}H_{38}Si_2$   
 M.W. : 670.99 g/mole  
 UV : 271 nm (in  $CH_2Cl_2$ )  
 PL : 432 nm (in  $CH_2Cl_2$ )  
 TGA : > 320 °C (0.5% weight loss)

Reference : *Adv. Funct. Mater. 2008, 18, 485*

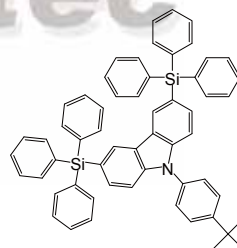


### LT-N484 | CzSi

9-(4-*tert*-Butylphenyl)-3,6-bis(triphenylsilyl)-9*H*-carbazole

CAS No. : 898546-82-2  
 Grade : Sublimed, > 99%  
 Formula :  $C_{58}H_{49}NSi_2$   
 M.W. : 816.19 g/mole  
 UV : 275,301 nm (in  $CH_2Cl_2$ )  
 PL : 354 nm (in  $CH_2Cl_2$ )  
 TGA : > 320 °C (0.5% weight loss)

Reference : *Adv. Mater. 2006, 18, 1216*

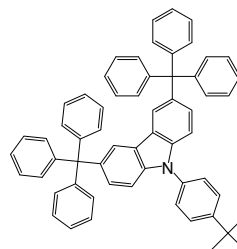


### LT-N485 | CzC

9-(4-*tert*-Butylphenyl)-3,6-ditrityl-9*H*-carbazole

CAS No. : 956373-04-9  
 Grade : Sublimed, > 99%  
 Formula :  $C_{60}H_{49}N$   
 M.W. : 784.04 g/mole  
 UV : 277,305 nm (in  $CH_2Cl_2$ )  
 PL : 369 nm (in  $CH_2Cl_2$ )  
 TGA : > 330 °C (0.5% weight loss)

Reference : *Appl. Mater. Interfaces, 2009, 1(3), 567-574*



# Organic Light Emitting Diode (OLED)

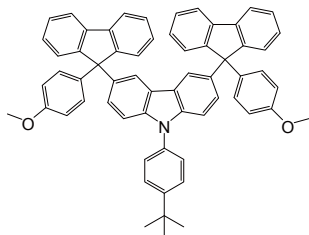
## Phosphorescent Host Materials

### LT-N486 | DFC

9-(4-*tert*-Butylphenyl)-3,6-bis(9-(4-methoxyphenyl)-9*H*-fluoren-9-yl)-9*H*-carbazole

CAS No. : 871018-07-4  
Grade : Sublimed, > 99%  
Formula : C<sub>62</sub>H<sub>49</sub>NO<sub>2</sub>  
M.W. : 840.06 g/mole  
UV : 341, 355 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 366 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 400 °C (0.5% weight loss)

Reference : *Org. Lett.*, Vol. 7, No. 24, 2005

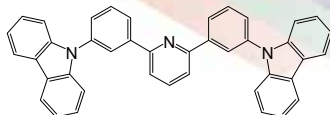


### LT-N491 | 26DCzPPy

2,6-Bis(3-(9*H*-carbazol-9-yl)phenyl)pyridine

CAS No. : 1013405-24-7  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>41</sub>H<sub>27</sub>N<sub>3</sub>  
M.W. : 561.67 g/mole  
UV : 239, 292 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 410 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 370 °C (0.5% weight loss)

Reference : *Chem. Mater.* 2008, 20, 1691–1693

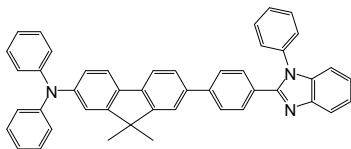


### LT-N493 | EFIN

9,9-Dimethyl-*N,N*-diphenyl-7-(4-(1-phenyl-1*H*-benzo[*d*]imidazol-2-yl)phenyl)-9*H*-fluoren-2-amine

CAS No. : 1705571-72-7  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>46</sub>H<sub>35</sub>N<sub>3</sub>  
M.W. : 629.79 g/mole  
UV : 370 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 428 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 320 °C (0.5% weight loss)

Reference : *Advanced Functional Materials* (2009), 19, (16), 2661–2670

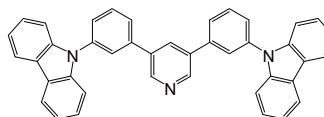


### LT-N494 | 35DCzPPy

3,5-Bis(3-(9*H*-carbazol-9-yl)phenyl)pyridine

CAS No. : 1013405-25-8  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>41</sub>H<sub>27</sub>N<sub>3</sub>  
M.W. : 561.67 g/mole  
UV : 307, 317 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 347 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 290 °C (0.5% weight loss)

Reference : *Chem. Mater.* 2008, 20, 1691–1693



### LT-N496 | SPPO1

9,9-Spirobifluoren-2-yl-diphenyl-phosphine oxide

CAS No. : 1125547-88-7  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>37</sub>H<sub>25</sub>OP  
M.W. : 516.57 g/mole  
UV : 307, 317 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 346 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 290 °C (0.5% weight loss)

Reference : *Appl. Phys. Lett.* 94, 013301 2009

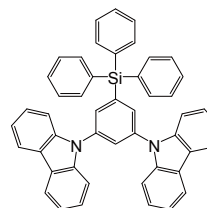


### LT-N497 | SimCP

9,9'-(5-(Triphenylsilyl)-1,3-phenylene)bis(9*H*-carbazole)

CAS No. : 850221-63-5  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>48</sub>H<sub>34</sub>N<sub>2</sub>Si  
M.W. : 666.88 g/mole  
UV : 293, 312, 345 nm (in THF)  
PL : 446 nm (in THF)  
TGA : > 300 °C (0.5% weight loss)

Reference : *Adv. Mater.*, 17, 285, 2005

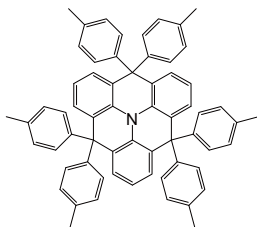


### LT-N499 | FATPA

4,4,8,8,-12,12-Hexa-*p*-tolyl-4*H*-8*H*-12*H*-12*C*-aza-dibenzo[*cd,mn*]pyrene

CAS No. : 1131007-94-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>63</sub>H<sub>51</sub>N  
 M.W. : 822.09 g/mole  
 UV : 311 nm (in Toluene)  
 PL : 375 nm (in Toluene)  
 TGA : > 320 °C (0.5% weight loss)

Reference : *Org. Lett., Vol. 11, No. 7, 2009, 1503-1506*

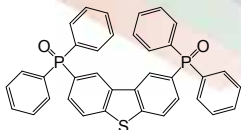


### LT-N4006 | PPT

2,8-Bis(diphenylphosphoryl)dibenzo[*b,d*]thiophene

CAS No. : 1019842-99-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>36</sub>H<sub>26</sub>O<sub>2</sub>P<sub>2</sub>S  
 M.W. : 584.60 g/mole  
 UV : 315, 328 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 351 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 320 °C (0.5% weight loss)

Reference : *J. Mater. Chem., 2011, 21, 14604-14609*

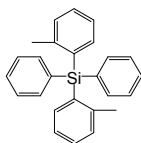


### LT-N4008 | UGH-1

Bis(2-methylphenyl)diphenylsilane

CAS No. : 18849-24-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>26</sub>H<sub>24</sub>Si  
 M.W. : 364.55 g/mole  
 UV : 265 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 298 nm (in CH<sub>2</sub>Cl<sub>2</sub>)

Reference : *Chem. Mater., 2004, 16, 4743-4747*

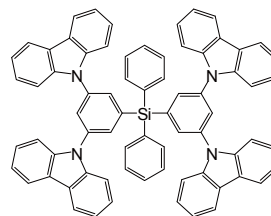


### LT-N4009 | SimCP2

Bis[3,5-di(9*H*-carbazol-9-yl)phenyl]diphenylsilane

CAS No. : 944465-42-3  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>72</sub>H<sub>48</sub>N<sub>4</sub>Si  
 M.W. : 977.26 g/mole  
 UV : 324, 338 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 362 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 380 °C (0.5% weight loss)

Reference : *J. Mater. Chem. 2010, 20, 8411-8416*

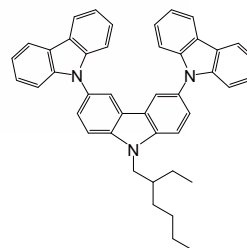


### LT-N4010 | TCz1

3,6-Bis(carbazol-9-yl)-9-(2-ethyl-hexyl)-9*H*-carbazole

CAS No. : 1021423-90-4  
 Grade : Sublimed, > 99% (HPLC)  
 Formula : C<sub>44</sub>H<sub>39</sub>N<sub>3</sub>  
 M.W. : 609.8 g/mole  
 UV : 293 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 396 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 280 °C (0.5% weight loss)

Reference : *Appl. Phys. Lett., 96, 093304, 2010*



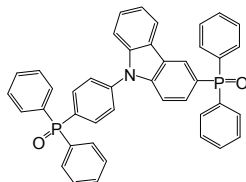
# Organic Light Emitting Diode (OLED)

## Phosphorescent Host Materials

### LT-N4011 | PPO21

3-(Diphenylphosphoryl)-9-(4-(diphenylphosphoryl)phenyl)-9H-carbazole

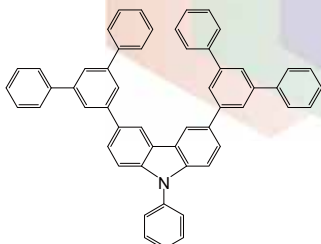
CAS No. : 1226860-68-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{42}H_{31}NO_2P_2$   
M.W. : 643.65 g/mole  
UV : 294, 338 nm (in  $CH_2Cl_2$ )  
PL : 361 nm (in THF)  
TGA : > 300 °C (0.5% weight loss)  
Reference : *Adv. Mater.* 2010, 22, 1-5



### LT-N4012 | CzTP

3,6-Bis[(3,5-diphenyl)phenyl]-9-phenyl-carbazole

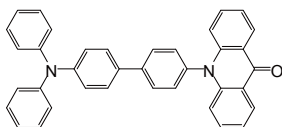
CAS No. : 1201649-79-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{54}H_{37}N$   
M.W. : 699.88 g/mole  
UV : 260 nm (in  $CH_2Cl_2$ )  
PL : 390 nm (in  $CH_2Cl_2$ )  
TGA : > 360 °C (0.5% weight loss)  
Reference : *Chem. Commun.* 2009, 6655-6657



### LT-N4014 | ADBP

10-(4'-(Diphenylamino)biphenyl-4-yl)acridin-9(10H)-one

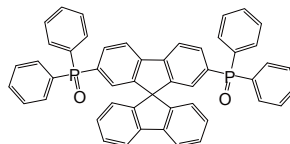
CAS No. : 1188546-10-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{37}H_{26}N_2O$   
M.W. : 514.62 g/mole  
UV : 375, 394 nm (in  $CH_2Cl_2$ )  
PL : 408 nm (in  $CH_2Cl_2$ )  
TGA : > 310 °C (0.5% weight loss)  
Reference : *Org. Lett.*, Vol. 11, No. 19, 2009



### LT-N4015 | SPPO13

2,7-Bis(diphenylphosphoryl)-9,9'-spirobifluorene

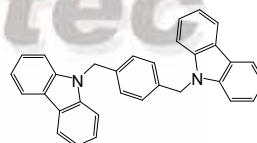
CAS No. : 1234510-13-4  
Grade : > 99% (HPLC)  
Formula :  $C_{49}H_{34}O_2P_2$   
M.W. : 716.74 g/mole  
UV : 282 nm (in  $CH_2Cl_2$ )  
PL : 373 nm (in  $CH_2Cl_2$ )  
TGA : > 330 °C (0.5% weight loss)  
Reference : *Thin Solid Films* 519 (2010) 906-910



### LT-N4016 | DCB

1,4-Bis((9H-carbazol-9-yl)methyl)benzene

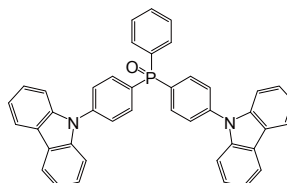
CAS No. : 166256-60-6  
Grade : > 99% (HPLC)  
Formula :  $C_{32}H_{24}N_2$   
M.W. : 436.55 g/mole  
UV : 293 nm (in  $CH_2Cl_2$ )  
PL : 351, 366 nm (in  $CH_2Cl_2$ )  
TGA : > 230 °C (0.5% weight loss)  
Reference : *Appl. Phys.* 41 (2008) 105114-105117



### LT-N4017 | BCPO

Bis-4-(N-carbazolyl)phenyl)phenylphosphine oxide

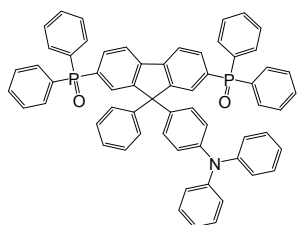
CAS No. : 1233407-28-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{42}H_{29}N_2OP$   
M.W. : 608.67 g/mole  
UV : 292 nm (in  $CH_2Cl_2$ )  
PL : 391 nm (in  $CH_2Cl_2$ )  
TGA : > 360 °C (0.5% weight loss)  
Reference : *Adv. Mater.* 2010, 22, 2468-2471



### LT-N4018 | POAPF

2,7-Bis(diphenylphosphoryl)-9-(4-diphenylamino)phenyl-9'-phenyl-fluorene

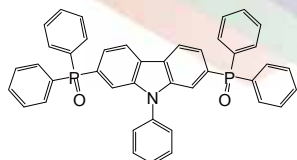
CAS No. : 1198361-98-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{61}H_{45}NO_2P_2$   
 M.W. : 885.96 g/mole  
 UV : 293, 315 nm (in  $CH_2Cl_2$ )  
 PL : 383 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)  
 Reference : *Advanced Functional Materials* (2009), 19, (17), 2834-2843



### LT-N4025 | PPO27

2,7-Bis(diphenylphosphoryl)-9-phenyl-9H-carbazole

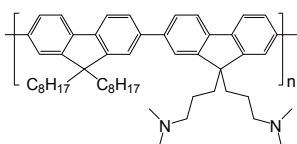
CAS No. : 1299463-56-1  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{42}H_{31}NO_2P_2$   
 M.W. : 643.65 g/mole  
 UV : 257, 309 nm (in  $CH_2Cl_2$ )  
 PL : 386 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)  
 Reference : *J. Mater. Chem.*, 2011, 21, 5638-5644



### LT-N4027 | PFN-DOF

Poly[(9,9-bis(3'-(N,N-dimethylamino)propyl)-2,7-fluorene)-alt-2,7-(9,9-dioctylfluorene)]

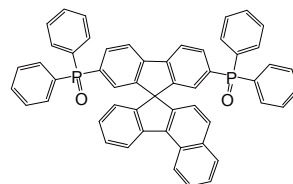
CAS No. : 673474-75-4  
 Grade :  $M_w > 10,000$  (GPC)  
 Formula :  $(C_{52}H_{70}N_2)_n$   
 UV : 378 nm (in  $CH_2Cl_2$ )  
 PL : 414 nm (in  $CH_2Cl_2$ )  
 Solubility : Soluble in  $CH_2Cl_2$ ,  $CHCl_3$ , Toluene  
 Reference : *Chem. Mater.*, Vol. 16, No. 4, 2004



### LT-N4029 | SPPO21

2,7-Bis(diphenylphosphoryl)spiro[fluorene-7,11'-benzofluorene]

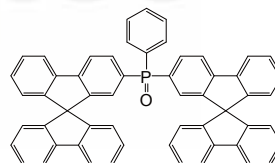
CAS No. : 1270960-64-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{53}H_{36}O_2P_2$   
 M.W. : 766.8 g/mole  
 UV : 287 nm (in  $CH_2Cl_2$ )  
 PL : 419 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)  
 Reference : *Thin Solid Films* 519 (2011) 4342-4346



### LT-N4034 | Dspiro-PO

Di(9,9-spirobifluorene-2-yl)-phenyl-phosphine oxide

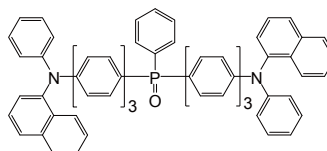
CAS No. : 824426-27-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{56}H_{35}OP$   
 M.W. : 754.85 g/mole  
 UV : 275 nm (film)  
 PL : 365 nm (film)  
 TGA : > 350 °C (0.5% weight loss)  
 Reference : *Appl. Phys. Lett.* 91, 103507(2007)



### LT-N4035 | NP3PPO

4'',4'''-(Phenylphosphoryl)bis(N-1-naphthyl-N-phenyl-1,1':4',1''-terphenyl-4-amine)

CAS No. : 1415633-86-1  
 Grade : > 98% (HPLC)  
 Formula :  $C_{74}H_{53}N_2OP$   
 M.W. : 1017.20 g/mole  
 UV : 349 nm (in  $CH_2Cl_2$ )  
 PL : 466 nm (in  $CH_2Cl_2$ )  
 TGA : > 320 °C (0.5% weight loss)  
 Reference : *Chem. Eur. J.* 2012, 18, 13828-13835





# Organic Light Emitting Diode (OLED)

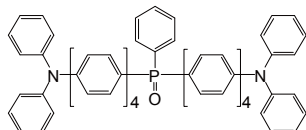
## Phosphorescent Host Materials

### LT-N4036 | NP4PPO

4''',4''''-(Phenylphosphoryl)bis(V-1-naphthyl-V-phenyl-1,1':4',1'':4'',1''''-quaterphenyl-4-amine)

CAS No. : 1415633-87-2  
Grade : > 98% (HPLC)  
Formula : C<sub>86</sub>H<sub>61</sub>N<sub>2</sub>OP  
M.W. : 1169.39 g/mole  
UV : 347 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 471 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 450 °C (0.5% weight loss)

Reference : Chem. Eur. J. 2012, 18, 13828-13835

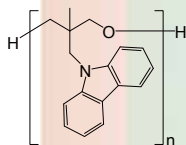


### LT-N4037 | PCMO

Poly[3-(carbazol-9-ylmethyl)-3-methyloxetane]

Grade : M<sub>w</sub> > 10000 (GPC)  
Formula : (C<sub>17</sub>H<sub>17</sub>NO)<sub>n</sub>  
UV : 237, 263 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
Solubility : Soluble in CHCl<sub>3</sub>,  
Chlorobenzene, Dichlorobenzene

Reference : J. Mater. Chem., 2011, 21, 9546-9552

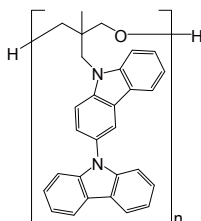


### LT-N4038 | PCOC

Poly[3-(carbazol-9-yl)-9-(3-methyloxetan-3-ylmethyl)carbazole]

Grade : M<sub>w</sub> > 10000 (GPC)  
Formula : (C<sub>29</sub>H<sub>24</sub>N<sub>2</sub>O)<sub>n</sub>  
UV : 238, 265 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 382 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
Solubility : Soluble in CHCl<sub>3</sub>,  
Chlorobenzene, Dichlorobenzene

Reference : J. Mater. Chem., 2011, 21, 9546-9552

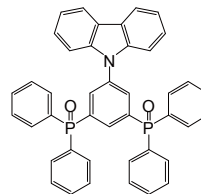


### LT-N4039 | CzPO2

9-(3,5-Bis(diphenylphosphoryl)phenyl)-9H-carbazole

CAS No. : 1256573-07-5  
Grade : Sublimed, > 99% (HPLC)  
Formula : C<sub>42</sub>H<sub>31</sub>NO<sub>2</sub>P<sub>2</sub>  
M.W. : 643.65 g/mole  
UV : 291 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 426 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 270 °C (0.5% weight loss)

Reference : Org. Lett., 2011, 13, 3146-3149

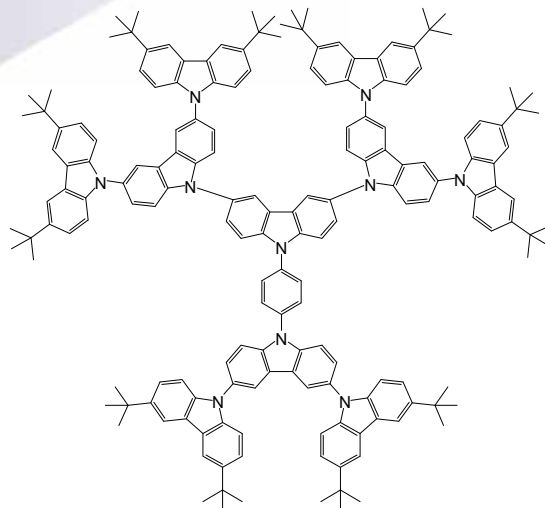


### LT-N4041 | G3-tCbz

6-(3',6'-Di-tert-butyl-6-(3,6-di-tert-butyl-9H-carbazol-9-yl)-9H-3,9'-bicarbazol-9-yl)-9-(4-(3',6'-di-tert-butyl-6-(3,6-di-tert-butyl-9H-carbazol-9-yl)-9H-3,9'-bicarbazol-9-yl)phenyl)-3',6'-bis(3,6-di-tert-butyl-9H-carbazol-9-yl)-9H-3,9'-bicarbazole

CAS No. : 1025079-68-8  
Grade : > 98% (HPLC)  
Formula : C<sub>174</sub>H<sub>172</sub>N<sub>10</sub>  
M.W. : 2403.29 g/mole  
UV : 244, 349 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 402 nm (in CH<sub>2</sub>Cl<sub>2</sub>)

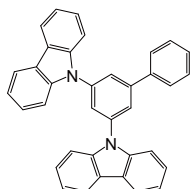
Reference : Adv. Mater., 2012, 24, 1873-1877



### LT-N4042 | Ph-MCP

3,5-Di-(9*H*-carbazol-9-yl)biphenyl

CAS No.	: 750573-28-5
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{36}H_{26}N_2$
M.W.	: 484.59 g/mole
UV	: 241, 292 nm (in $CH_2Cl_2$ )
PL	: 363 nm (in $CH_2Cl_2$ )
TGA	: > 270 °C (0.5% weight loss)

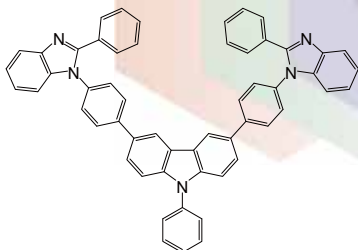


### LT-N4046 | CNBzIm

9-Phenyl-3,6-bis(4-(1-phenyl-1*H*-benzo[*d*]imidazol-2-yl)phenyl)-9*H*-carbazole

CAS No.	: 1258780-50-5
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{56}H_{37}N_5$
M.W.	: 779.93 g/mole
UV	: 299 nm (in $CH_2Cl_2$ )
PL	: 392 nm (in $CH_2Cl_2$ )
TGA	: > 350 °C (0.5% weight loss)

Reference : *J. Mater. Chem.*, 2011, 21, 19249-19256



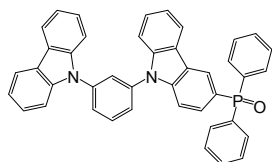
### LT-N4047 | mCPPPO1

9-(3-(9*H*-Carbazol-9-yl)phenyl)-3-(diphenylphosphoryl)-9*H*-carbazole

CAS No.	: 1296229-26-9
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{42}H_{29}N_2OP$
M.W.	: 608.67 g/mole
UV	: 324, 338 nm (in $CH_2Cl_2$ )
PL	: 361 nm (in $CH_2Cl_2$ )
TGA	: > 270 °C (0.5% weight loss)

Reference : 1. *Organic Electronics* 12 (2011) 1711-1715

2. *Adv. Mater.* 2011, 23, 1436-1441

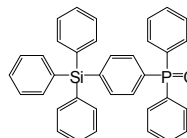


### LT-N4048 | TSP01

Diphenyl-4-triphenylsilylphenyl-phosphine oxide

CAS No.	: 1286708-86-8
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{36}H_{29}OPSi$
M.W.	: 536.67 g/mole
UV	: 266 nm (in $CH_2Cl_2$ )
PL	: 298 nm (in $CH_2Cl_2$ )
TGA	: > 300 °C (0.5% weight loss)

Reference : *Adv. Mater.* 2011, 23, 1436-1441

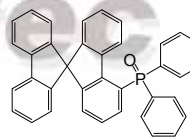


### LT-N4049 | SPPO11

9,9-Spirobifluoren-4-yl-diphenyl-phosphineoxide

CAS No.	: 1314243-72-5
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{37}H_{25}OP$
M.W.	: 516.57 g/mole
UV	: 273, 309, 323 nm (in $CH_2Cl_2$ )
PL	: 346 nm (in $CH_2Cl_2$ )
TGA	: > 250 °C (0.5% weight loss)

Reference : *Organic Electronics* 11 (2010) 1059-1065

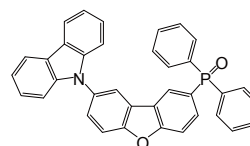


### LT-N4050 | DFCzPO

9-(8-(Diphenylphosphoryl)dibenzo[*b,f*]furan-2-yl)-9*H*-carbazole

CAS No.	: 1349901-36-5
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{36}H_{24}NO_2P$
M.W.	: 533.56 g/mole
UV	: 291, 338 nm (in $CH_2Cl_2$ )
PL	: 392 nm (in $CH_2Cl_2$ )
TGA	: > 300 °C (0.5% weight loss)

Reference : *Chem. Asian J.* 2011, 6, 2895-2898



# Organic Light Emitting Diode (OLED)

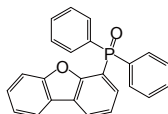
## Phosphorescent Host Materials

### LT-N4051 | DBFPPPO

Dibenzofuran-4-yl-diphenyl-phosphine-oxide

CAS No. : 1268162-33-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{24}H_{17}O_2P$   
M.W. : 368.36 g/mole  
UV : 288 nm (in  $CH_2Cl_2$ )  
PL : 328 nm (in  $CH_2Cl_2$ )  
TGA : > 320 °C (0.5% weight loss)

Reference : *Chem. Eur. J.* 2011, 17, 445-449

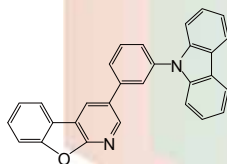


### LT-N4057 | PCz-BFP

3-(3-(9H-Carbazol-9-yl)phenyl)benzofuro[2,3-b]pyridine

CAS No. : 1424369-36-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{29}H_{18}N_2O$   
M.W. : 410.47 g/mole  
UV : 241, 293 nm (in  $CH_2Cl_2$ )  
PL : 364 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)

Reference : *Adv. Mater.* 2013, 25, 596-600

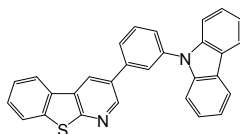


### LT-N4058 | BTP1

3-(3-(9H-Carbazol-9-yl)phenyl)benzo[4,5]thieno[2,3-b]pyridine

CAS No. : 1421599-23-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{29}H_{18}N_2S$   
M.W. : 426.53 g/mole  
UV : 291, 339 nm (in  $CH_2Cl_2$ )  
PL : 365 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)

Reference : *Chem. Commun.*, 2013, 49, 1446-1448

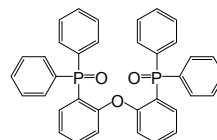


### LT-N4060 | DPEPO

Bis[2-(diphenylphosphino)phenyl]ether oxide

CAS No. : 808142-23-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{36}H_{28}O_3P_2$   
M.W. : 570.55 g/mole  
UV : 388 nm (in  $CH_2Cl_2$ )  
PL : 311 nm (in  $CH_2Cl_2$ )  
TGA : > 320 °C (0.5% weight loss)

Reference : *Chem. Eur. J.* 2011, 17, 5800-5803

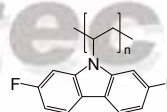


### LT-N4062 | 2,7-F-PVF

Poly[9-sec-butyl-2,7-difluoro-9H-carbazole]

CAS No. : 1227083-33-1  
Grade :  $M_w > 30,000$  (GPC)  
Formula :  $(C_{14}H_9F_2N)_n$   
UV : 261, 294 nm (in  $CH_2Cl_2$ )  
PL : 397 nm (in  $CH_2Cl_2$ )  
Solubility : Soluble in  $CHCl_3$ ,  
Chlorobenzene, Dichlorobenzene

Reference : *J Phys. Chem. C* 2012, 116, 20681-20687

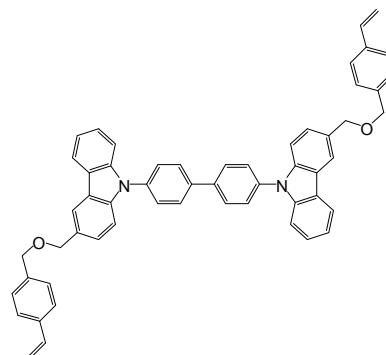


### LT-N4063 | DV-CBP

4,4'-Bis(3-((4-vinylphenoxy)methyl)-9H-carbazol-9-yl)biphenyl

CAS No. : 1428901-78-3  
Grade : > 99% (HPLC)  
Formula :  $C_{54}H_{40}N_2O_2$   
M.W. : 748.91 g/mole  
UV : 246, 295 nm (in  $CH_2Cl_2$ )  
PL : 381 nm (in  $CH_2Cl_2$ )

Reference : *Organic Electronics*, 14, 2013, 1614-1620

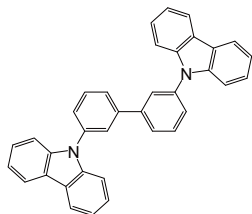


### LT-N4069 | m-CBP

3,3'-Di(9H-carbazol-9-yl)biphenyl

CAS No. : 342638-54-4  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{26}H_{24}N_2$   
 M.W. : 484.59 g/mole  
 UV : 292, 328 nm (in  $CH_2Cl_2$ )  
 PL : 349 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)

Reference : 1. *Organic Electronics* 12 (2011) 1711-1715  
 2. *Adv. Mater.* 2011, 23, 1436-1441

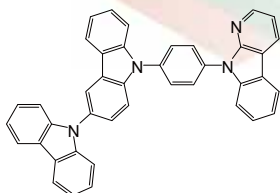


### LT-N4070 | pBCb2Cz

9-(4-(9H-Pyrido[2,3-b]indol-9-yl)phenyl)-9H-3,9'-bicarbazole

CAS No. : 1446517-60-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{41}H_{26}N_4$   
 M.W. : 574.67 g/mole  
 UV : 239, 294 nm (in  $CH_2Cl_2$ )  
 PL : 381 nm (in  $CH_2Cl_2$ )  
 TGA : > 250 °C (0.5% weight loss)

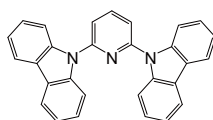
Reference : 1. *Organic Electronics* 12 (2011) 1711-1715  
 2. *Adv. Mater.* 2011, 23, 1436-1441



### LT-N4072 | PYD-2Cz

2,6-Di(9H-carbazol-9-yl)pyridine

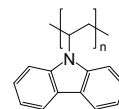
CAS No. : 168127-49-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{29}H_{19}N_3$   
 M.W. : 409.48 g/mole  
 UV : 241, 290 nm (in  $CH_2Cl_2$ )  
 PL : 373 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)



### LT-N4077 | PVK

Poly(9-vinylcarbazole)

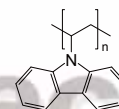
CAS No. : 25067-59-8  
 Grade :  $M_w > 20,000$  (GPC)  
 Formula :  $(C_{14}H_{11}N)_n$   
 UV : 261, 294 nm (in  $CH_2Cl_2$ )  
 PL : 380 nm (in THF)  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



### LT-N4078 | PVK

Poly(9-vinylcarbazole)

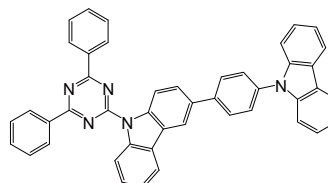
CAS No. : 25067-59-8  
 Grade :  $M_w > 100,000$  (GPC)  
 Formula :  $(C_{14}H_{11}N)_n$   
 UV : 261, 294 nm (in  $CH_2Cl_2$ )  
 PL : 380 nm (in THF)  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



### LT-N4079 | CPCBPTz

3-(4-(9H-Carbazol-9-yl)phenyl)-9-(4,6-diphenyl-1,3,5-triazin-2-yl)-9H-carbazole

CAS No. : 1407183-68-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{45}H_{29}N_5$   
 M.W. : 639.75 g/mole  
 UV : 252, 331 nm (in  $CH_2Cl_2$ )  
 TGA : > 250 °C (0.5% weight loss)



# Organic Light Emitting Diode (OLED)

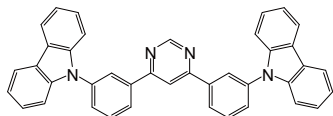
## Phosphorescent Host Materials

### LT-N4080 | 46DCzPPM

4,6-Bis(3-(9H-carbazol-9-yl)phenyl)pyrimidine

CAS No. : 1262678-77-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{40}H_{26}N_4$   
M.W. : 562.66 g/mole  
UV : 240, 292 nm (in  $CH_2Cl_2$ )  
PL : 476 nm (in  $CH_2Cl_2$ )  
TGA : > 280 °C (0.5% weight loss)

Reference : *Organic Electronics* (2011), 12(5), 843-850

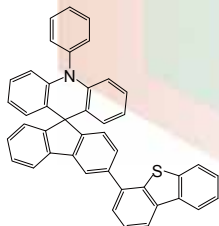


### LT-N4081 | STDBT-4

3'-(Dibenzo[b,d]thiophen-4-yl)-10-phenyl-10H-spiro[acridine-9,9'-fluorene]

CAS No. : 1467099-24-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{43}H_{27}NS$   
M.W. : 589.75 g/mole  
UV : 316 nm (in Toluene)  
PL : 376 nm (in Toluene)  
TGA : > 270 °C (0.5% weight loss)

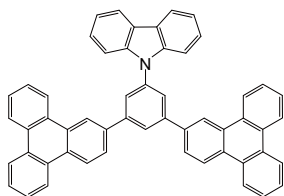
Reference : *Journal of Materials Chemistry C: Materials for Optical and Electronic Devices* (2013), 1(40), 6575-6584



### LT-N4082 | DTP-mCP

9-(3,5-Di(triphenylen-2-yl)phenyl)-9H-carbazole

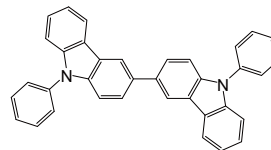
CAS No. : 1498411-20-3  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{54}H_{33}N$   
M.W. : 695.85 g/mole  
UV : 273 nm (in  $CHCl_3$ )  
PL : 377 nm (in  $CHCl_3$ )  
TGA : > 280 °C (0.5% weight loss)



### LT-N4085 | BCzPh

9,9'-Diphenyl-9H,9'H-3,3'-bicarbazole

CAS No. : 571102-62-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{36}H_{24}N_2$   
M.W. : 484.59 g/mole  
UV : 303 nm (in  $CH_2Cl_2$ )  
TGA : > 250 °C (0.5% weight loss)

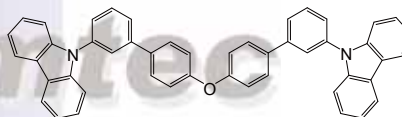


### LT-N4086 | CBBPE

9,9'-(Oxybis([1,1'-biphenyl]-4',3'-diyl))bis(9H-carbazole)

CAS No. : 1470161-29-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{48}H_{32}N_2O$   
M.W. : 652.78 g/mole  
UV : 240 nm (in  $CH_2Cl_2$ )  
PL : 350 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)

Reference : *Dyes and Pigments* (2013), 98(3), 372-376

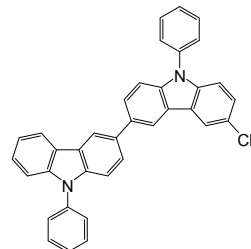


### LT-N4088 | BCzSCN

9,9'-Diphenyl-9H,9'H-3,3'-bicarbazole-6-carbonitrile

CAS No. : 1462896-48-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{37}H_{23}N_3$   
M.W. : 509.6 g/mole  
UV : 250, 301 nm (in  $CH_2Cl_2$ )  
PL : 416 nm (in  $CH_2Cl_2$ )  
TGA : > 270 °C (0.5% weight loss)

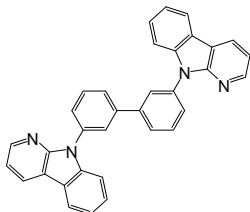
Reference : *Journal of Materials Chemistry C: Materials for Optical and Electronic Devices* (2013), 1(48), 8177-8185



### LT-N4092 | CbBPCb

3,3'-Di(9H-pyrido[2,3-b]indol-9-yl)biphenyl

Formula :  $C_{34}H_{22}N_4$   
M.W. : 486.57 g/mole

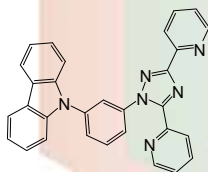


### LT-N4099 | m-cbtz

9-(3-(3,5-Di(pyridin-2-yl)-1H-1,2,4-triazol-1-yl)phenyl)-9H-carbazole

CAS No. : 1361953-33-4  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{30}H_{20}N_6$   
M.W. : 464.52 g/mole  
UV : 293, 340 nm (in THF)  
PL : 427 nm (in THF)  
TGA : > 270 °C (0.5% weight loss)

Reference : *Journal of Materials Chemistry* (2012), 22(12), 5410-5418

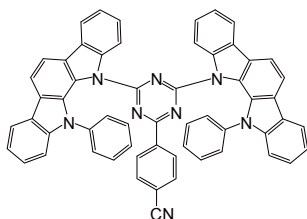


### LT-N4100 | BBICT

4-(4,6-Bis[12-phenylindolo[2,3-a]carbazol-11(12H)-yl]-1,3,5-triazin-2-yl)-benzonitrile

CAS No. : 1617496-77-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{58}H_{34}N_8$   
M.W. : 842.94 g/mole  
UV : 260, 330 nm (in  $CH_2Cl_2$ )  
PL : 450 nm (in  $CH_2Cl_2$ )  
TGA : > 320 °C (0.5% weight loss)

Reference : *Advanced Functional Materials* (2014), 24(23), 3551-3561

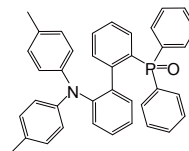


### LT-N4101 | POBPM DPA

2'-(Diphenylphosphinyl)-N,N-bis(4-methylphenyl)-1,1'-biphenyl]-2-amine

CAS No. : 1579983-04-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{38}H_{32}NOP$   
M.W. : 549.64 g/mole  
UV : 444 nm (in Toluene)  
PL : 458 nm (in 2-MeTHF)  
TGA : > 250 °C (0.5% weight loss)

Reference : *Angew. Chem. Int. Ed.* 2014, 53, 2147-2151

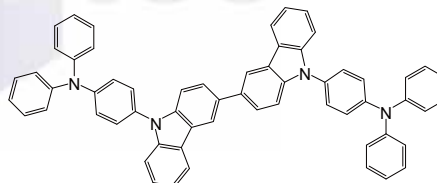


### LT-N4102 | BCzTPA

4,4'-(9H,9'H-3,3'-Bicarbazole-9,9'-diyl)bis(N,N-diphenylaniline)

CAS No. : 1032174-52-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{60}H_{42}N_4$   
M.W. : 819.00 g/mole  
UV : 310, 341 nm (film)  
PL : 397 nm (film)

Reference : 1. *Adv. Funct. Mater.* 2013, 23, 5550-5555 ;  
2. *Adv. Mater.* 2012, 24, 3212-3217  
3. *J. Mater. Chem. C*, 2015, 3, 1700

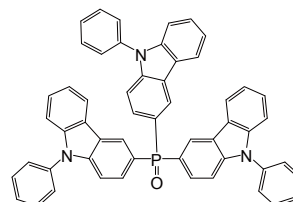


### LT-N4107 | POCz3

3,3',3''-Phosphinylidynetris[9-phenyl-9H-carbazole

CAS No. : 1392204-91-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{54}H_{36}N_3OP$   
M.W. : 773.86 g/mole  
UV : 260 nm (in  $CH_2Cl_2$ )  
PL : 351 nm (in  $CH_2Cl_2$ )  
TGA : > 300 °C (0.5% weight loss)

Reference : 1. *Dalton Transactions* (2015), 44(33), 14613-14624  
2. *Organic Electronics* (2011), 12(12), 2025-2032



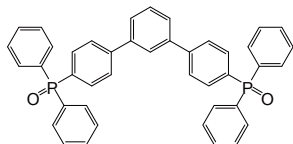
# Organic Light Emitting Diode (OLED)

## Phosphorescent Host Materials

### LT-N4115 | BPOPB

1,3-Bis(3-(diphenylphosphoryl)phenyl)benzene

Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{42}H_{32}O_2P_2$
M.W.	: 630.65 g/mole
UV	: 251, 290 nm (in $CH_2Cl_2$ )
PL	: 340 nm (in $CH_2Cl_2$ )
TGA	: > 270 °C (0.5% weight loss)

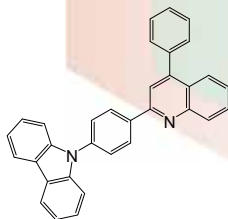


### LT-N4116 | CzPPQ

9-(4-(4-Phenylquinolin-2-yl)phenyl)-9H-carbazole

CAS No.	: 1617494-49-1
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{33}H_{22}N_2$
M.W.	: 446.54 g/mole
UV	: 247, 292, 342 nm (in $CH_2Cl_2$ )
PL	: 442 nm (in $CH_2Cl_2$ )
TGA	: > 270 °C (0.5% weight loss)

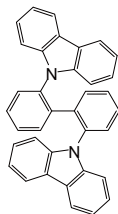
Reference : 1. *Journal of Materials Chemistry C: Materials for Optical and Electronic Devices*, 2(30), 6183-6191; 2014  
2. *ACS Applied Materials & Interfaces* (2015), 7(19), 10466-10474



### LT-N4129 | o-CBP

2,2'-Di(9H-carbazol-9-yl)biphenyl

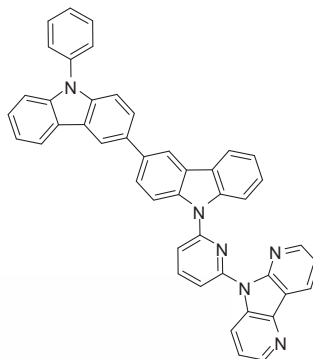
CAS No.	: 592551-54-7
Grade	: Sublimed, > 99%
Formula	: $C_{36}H_{24}N_2$
M.W.	: 484.59 g/mole



### LT-N4147 | NCzmPy2Cz

9-(6-(5H-pyrrolo[2,3-b:4,5-b']dipyridin-5-yl)pyridin-2-yl)-9'-phenyl-9H,9'-H-3,3'-bicarbazole

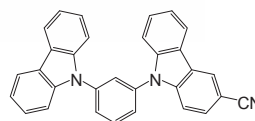
CAS No.	: 2041519-51-9
Grade	: Sublimed, >99 % (HPLC)
Formula	: $C_{45}H_{28}N_6$
M.W.	: 652.74 g/mole
UV	: 300,329 nm (in $CH_2Cl_2$ )
PL	: 385,402 nm (in $CH_2Cl_2$ )
HOMO	: -5.54 eV
LUMO	: -2.16 eV



### LT-N4148 | mCPCN

9-(3-(9H-carbazol-9-yl)phenyl)-9H-carbazole-3-carbonitrile

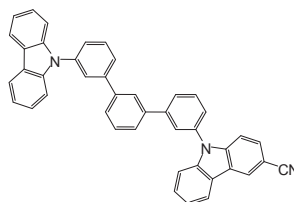
CAS No.	: 1392506-99-8
Grade	: Sublimed, >99% (HPLC)
Formula	: $C_{31}H_{19}N_3$
M.W.	: 433.5 g/mole



### LT-N4150 | TCzCN

9-(3''-(carbazol-9-yl)-[1,1',3',1''-terphenyl]-3-yl)-carbazole-3-carbonitrile

Grade	: Sublimed, >99% (HPLC)
Formula	: $C_{43}H_{27}N_3$
M.W.	: 585.69 g/mole



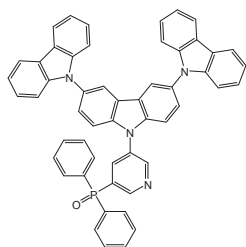


### LT-N4159 | m-POPpyCz

(5-(9'H-[9,3':6',9''-tercarbazol]-9'-yl)pyridin-3-yl) diphenylphosphine

CAS No. : 2151067-61-5  
Grade : Sublimed, >99 % (HPLC)  
Formula : C<sub>53</sub>H<sub>35</sub>N<sub>4</sub>OP  
M.W. : 774.84 g/mole  
UV : 296,326,343(film)  
Emission : 423 nm (film)  
HOMO : -5.63 eV  
LUMO : -2.54 eV

Reference : ACS Appl. Mater. Interfaces 2017, 9, 37888-37897



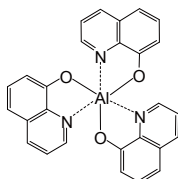
# Organic Light Emitting Diode (OLED)

## Fluorescent Host Materials

### LT-E401 | Alq3

Tris(8-hydroxy-quinolino)aluminium

CAS No. : 2085-33-8  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{27}H_{18}AlN_3O_3$   
M.W. : 459.43 g/mole  
UV : 259 nm (in THF)  
PL : 512 nm (in THF)  
TGA : > 270 °C (0.5% weight loss)



### LT-E403 | ADN

9,10-Di(naphth-2-yl)anthracene

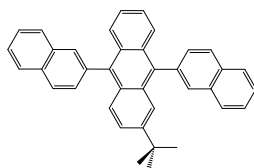
CAS No. : 122648-99-1  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{34}H_{22}$   
M.W. : 430.54 g/mole  
UV : 375, 395 nm (in THF)  
PL : 425 nm (in THF)  
TGA : > 290 °C (0.5% weight loss)



### LT-E404 | TBADN

2-tert-Butyl-9,10-di(naphth-2-yl)anthracene

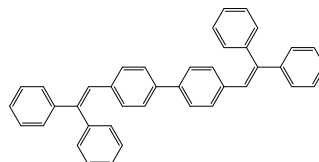
CAS No. : 274905-73-6  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{38}H_{30}$   
M.W. : 486.64 g/mole  
UV : 375, 395 nm (in THF)  
PL : 431 nm (in THF)  
TGA : > 290 °C (0.5% weight loss)



### LT-E405 | DPVBi

4,4'-Bis(2,2-diphenylethenyl)-1,1'-biphenyl

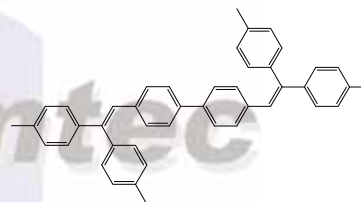
CAS No. : 142289-08-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{40}H_{30}$   
M.W. : 510.23 g/mole  
UV : 353 nm (in  $CHCl_3$ )  
PL : 442 nm (in  $CHCl_3$ )  
TGA : > 300 °C (0.5% weight loss)



### LT-E406 | p-DMDPVBi

4,4'-bis(2,2-dip-tolylvinyl)biphenyl Chemical

CAS No. : 135804-06-7  
Grade : > 99% (HPLC)  
Formula :  $C_{44}H_{38}$   
M.W. : 566.77 g/mole

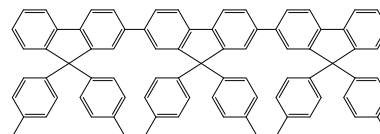


### LT-E408 | TDAF

2,7-Bis[9,9-di(4-methylphenyl)-fluoren-2-yl]-9,9-di(4-methylphenyl)fluorene

CAS No. : 474918-42-8  
Grade : Sublimed, > 98% (HPLC)  
Formula :  $C_{81}H_{62}$   
M.W. : 1035.36 g/mole  
UV : 353 nm (in THF)  
PL : 419 nm (in THF)  
TGA : > 370 °C (0.5% weight loss)

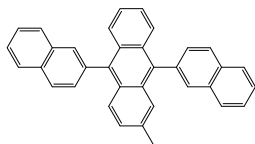
Reference : *J. Phys. Chem. C* 2007, 111, 108-115



**LT-E410** | MADN

2-Methyl-9,10-bis(naphthalen-2-yl)anthracene

CAS No. : 804560-00-7  
 Grade : Sublimed, > 99.5% (HPLC)  
 Formula :  $C_{35}H_{24}$   
 M.W. : 444.57 g/mole  
 UV : 379, 399 nm (in  $CH_2Cl_2$ )  
 PL : 439 nm (in  $CH_2Cl_2$ )  
 TGA : > 300 °C (0.5% weight loss)

**LT-E411** | BSBF

2-(9,9-Spirobifluoren-2-yl)-9,9-spirobifluorene

CAS No. : 664345-18-0  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{50}H_{30}$   
 M.W. : 630.77 g/mole  
 UV : 330 nm (in THF)  
 PL : 384 nm (in THF)  
 TGA : > 310 °C (0.5% weight loss)

Reference : *Org. Lett., Vol. 7, No. 23, 2005***LT-E412** | TSBF

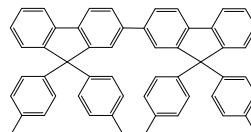
2,7-Bis(9,9-spirobifluoren-2-yl)-9,9-spirobifluorene

CAS No. : 518997-91-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{75}H_{44}$   
 M.W. : 945.15 g/mole  
 UV : 350 nm (in THF)  
 PL : 415 nm (in THF)  
 TGA : > 390 °C (0.5% weight loss)

Reference : *J. Phys. Chem. C 2007, 111, 108-115***LT-E413** | BDAF

2-[9,9-Di(4-methylphenyl)-fluoren-2-yl]-9,9-di(4-methylphenyl)fluorene

CAS No. : 854046-47-2  
 Grade : Sublimed, > 97% (HPLC)  
 Formula :  $C_{54}H_{42}$   
 M.W. : 690.91 g/mole  
 UV : 333 nm (in THF)  
 PL : 386 nm (in THF)  
 TGA : > 310 °C (0.5% weight loss)

Reference : *Org. Lett., Vol. 7, No. 23, 2005***LT-N428** | 2,2'-Spiro-Pye

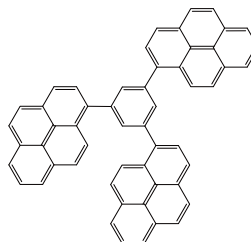
2,2'-Dipyrenyl-9,9-spirobifluorene

CAS No. : 831222-16-3  
 Grade : Sublimed, > 98% (HPLC)  
 Formula :  $C_{57}H_{32}$   
 M.W. : 716.86 g/mole  
 UV : 279, 347 nm (in THF)  
 PL : 414 nm (in THF)  
 TGA : > 440 °C (0.5% weight loss)

**LT-N429** | TSB3

1,3,5-Tri(pyren-1-yl)benzene

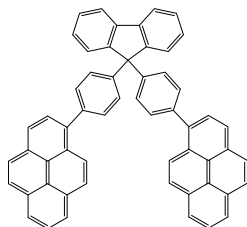
CAS No. : 349666-25-7  
 Grade : Sublimed, > 95% (HPLC)  
 Formula :  $C_{54}H_{30}$   
 M.W. : 678.81 g/mole  
 UV : 280, 352 nm (in THF)  
 PL : 388 nm (in THF)  
 TGA : > 360 °C (0.5% weight loss)

Reference : *Synthetic Metals 143 (2004) 89-96*

**LT-N447** | BPPF

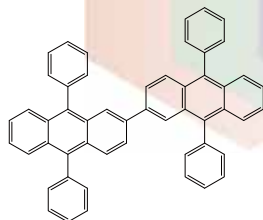
9,9-Bis[4-(pyrenyl)phenyl]-9H-fluorene

CAS No. : 1174006-47-3  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{57}H_{34}$   
 M.W. : 718.88 g/mole  
 UV : 280, 344 nm (in THF)  
 PL : 402 nm (in THF)  
 TGA : > 430 °C (0.5% weight loss)

**LT-N452** | TPBA

2,2'-Bi(9,10-diphenyl-anthracene)

CAS No. : 172285-72-2  
 Grade : Sublimed, > 99%  
 Formula :  $C_{52}H_{34}$   
 M.W. : 658.83 g/mole  
 UV : 294, 333 nm (in THF)  
 PL : 455 nm (in THF)  
 TGA : > 390 °C (0.5% weight loss)

Reference: *Appl. Phys. Lett.*, 89, 063504(2006).**LT-N458** | Spiro-Pye

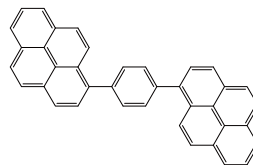
2,7-Dipyrenyl-9,9-spirobifluorene

CAS No. : 886456-80-0  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{57}H_{32}$   
 M.W. : 716.86 g/mole  
 UV : 363 nm (in THF)  
 PL : 424 nm (in THF)  
 TGA : > 440 °C (0.5% weight loss)

**LT-N472** | p-Bpye

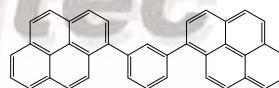
1,4-Di(pyren-1-yl)benzene

CAS No. : 475460-77-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{38}H_{22}$   
 M.W. : 478.58 g/mole  
 UV : 280, 351 nm (in  $CH_2Cl_2$ )  
 PL : 431 nm (in  $CH_2Cl_2$ )  
 TGA : > 320 °C (0.5% weight loss)

Reference: *Advanced Functional Materials* (2008), 18, (1), 67-75.**LT-N473** | m-Bpye

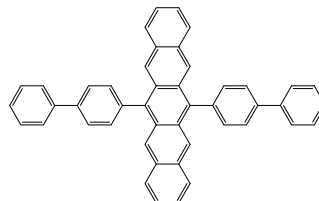
1,3-Di(pyren-1-yl)benzene

CAS No. : 1616657-81-8  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{38}H_{22}$   
 M.W. : 478.58 g/mole  
 UV : 279, 350 nm (in THF)  
 PL : 384 nm (in THF)  
 TGA : > 330 °C (0.5% weight loss)

**LT-N478** | DBPenta

6,13-Di-biphenyl-4-yl-pentacene

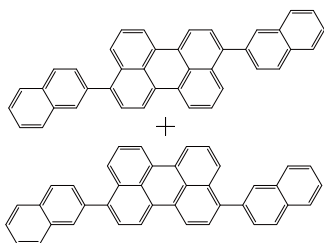
CAS No. : 1254039-84-3  
 Grade : Sublimed, > 99%  
 Formula :  $C_{46}H_{30}$   
 M.W. : 582.73 g/mole  
 UV : 305 nm (in THF)  
 PL : 620 nm (in THF)  
 TGA : > 360 °C (0.5% weight loss)

Reference: *J. Phys. Chem. Lett.* 2012, 3, 1079-1083

**LT-N479** | DNP

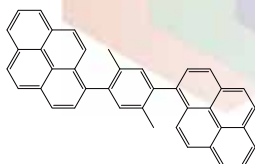
3,9-Di(naphthalen-2-yl)perylene and 3,10-di(naphthalen-2-yl) perylene mixture

CAS No. : 959611-30-4 and 919089-75-1  
 Grade : Sublimed, > 99%  
 Formula :  $C_{40}H_{24}$   
 M.W. : 504.62 g/mole  
 UV : 434, 460 nm (in THF)  
 PL : 488 nm (in THF)  
 TGA : > 320 °C (0.5% weight loss)

Reference : *Journal of Applied Physics*, 102, 104908(2007)**LT-N481** | DMPPP

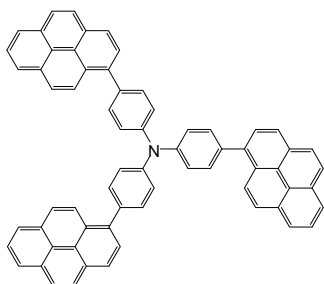
1,1'-(2,5-Dimethyl-1,4-phenylene)dipyrene

CAS No. : 1036404-84-8  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{40}H_{26}$   
 M.W. : 506.63 g/mole  
 PL : 397 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)

Reference : *Adv. Mater.* 2012, 24, 5867-5871**LT-N487** | TPyPA

Tris[4-(pyrenyl)-phenyl]amine

CAS No. : 349669-77-8  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{66}H_{39}N$   
 M.W. : 846.02 g/mole  
 UV : 271 nm (in  $CH_2Cl_2$ )  
 PL : 479 nm (in  $CH_2Cl_2$ )  
 TGA : > 470 °C (0.5% weight loss)

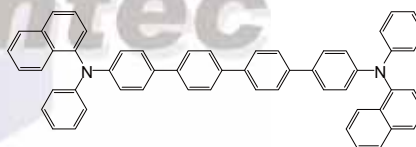
Reference : *Appl. Phys. Lett.*, 91, 023503 (2007).**LT-N488** | BANE

10,10'-Di(biphenyl-4-yl)-9,9'-bianthracene

CAS No. : 172285-79-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{52}H_{34}$   
 M.W. : 658.83 g/mole  
 UV : 260 nm (in  $CH_2Cl_2$ )  
 PL : 449 nm (in  $CH_2Cl_2$ )  
 TGA : > 320 °C (0.5% weight loss)

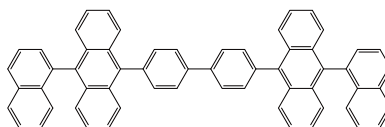
Reference : *Organic Electronics* 8 (2007), 735-742.**LT-N489** | 4P-NPB*N,N'*-Di-(1-naphthalenyl)-*N,N'*-diphenyl-[1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diamine

CAS No. : 948552-24-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{56}H_{40}N_2$   
 M.W. : 740.93 g/mole  
 UV : 351 nm (in  $CH_2Cl_2$ )  
 PL : 422 nm (in  $CH_2Cl_2$ )  
 TGA : > 380 °C (0.5% weight loss)

Reference : *Adv. Mater.* 2007, 19, 3672-3676**LT-N490** | BUBH-3

4,4'-Di[10-(naphthalen-1-yl)anthracen-9-yl]biphenyl

CAS No. : 1002328-32-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{60}H_{38}$   
 M.W. : 758.94 g/mole  
 UV : 262 nm (in  $CH_2Cl_2$ )  
 PL : 420 nm (in  $CH_2Cl_2$ )  
 TGA : > 440 °C (0.5% weight loss)

Reference : *Appl. Phys. Lett.* 91, 183504 (2007)

# Organic Light Emitting Diode (OLED)

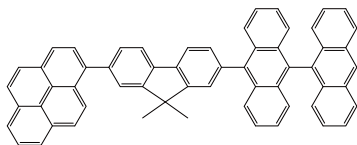
## Fluorescent Host Materials

### LT-N4004 | BAnFPye

1-(7-(9,9'-Bianthracen-10-yl)-9,9-dimethyl-9H-fluoren-2-yl)pyrene

CAS No. : 1705571-70-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{59}H_{38}$   
M.W. : 746.93 g/mole  
UV : 356 nm (in  $CH_2Cl_2$ )  
PL : 433 nm (in  $CH_2Cl_2$ )  
TGA : > 440 °C (0.5% weight loss)

Reference : TW. I402243

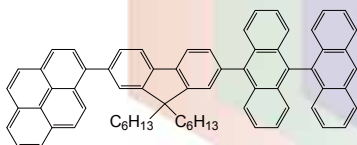


### LT-N4005 | DAnF6Py

1-(7-(9,9'-Bianthracen-10-yl)-9,9-dihexyl-9H-fluoren-2-yl)pyrene

CAS No. : 1705571-71-6  
Grade : > 99% (HPLC)  
Formula :  $C_{69}H_{58}$   
M.W. : 877.20 g/mole  
UV : 358 nm (in  $CH_2Cl_2$ )  
PL : 437 nm (in  $CH_2Cl_2$ )

Reference : TW. I402243

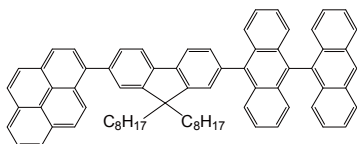


### LT-N4040 | BAnF8Py

1-(7-(9,9'-Bianthracen-10-yl)-9,9-dioctyl-9H-fluoren-2-yl)pyrene

CAS No. : 1258522-34-7  
Grade : > 99% (HPLC)  
Formula :  $C_{73}H_{66}$   
M.W. : 943.31 g/mole  
UV : 257, 356 nm (in  $CH_2Cl_2$ )  
PL : 440 nm (in  $CH_2Cl_2$ )  
TGA : > 330 °C (0.5% weight loss)

Reference : TW. I402243

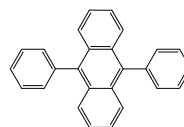


### LT-N4084 | ADP

9,10-Diphenylanthracene

CAS No. : 1499-10-1  
Grade : Sublimed, > 99%  
Formula :  $C_{26}H_{18}$   
M.W. : 330.42 g/mole  
TGA : > 150 °C (0.5% weight loss)

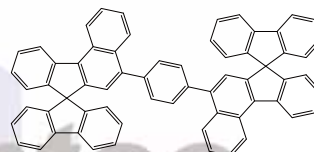
Reference : Journal of Chemical Education (2013), 90(6), 786-789



### LT-N4087 | SBFF2B

1,4-Di(spiro[benzo[c]fluorene-7,9'-fluorene]-5-yl)benzene

CAS No. : 1499-10-1  
Grade : Sublimed, > 99%  
Formula :  $C_{26}H_{18}$   
M.W. : 330.42 g/mole

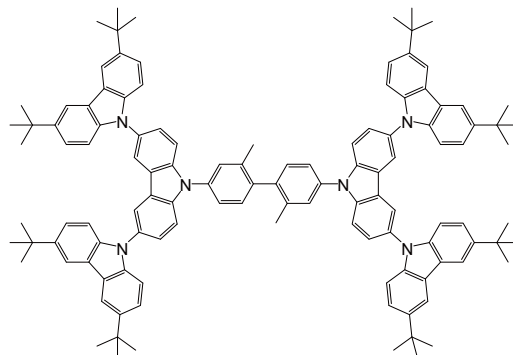


### LT-N4090 | CMP

9,9'-(2,2'-Dimethylbiphenyl-4,4'-diyl)bis(3',6'-di-tert-butyl-6-(3,6-di-tert-butyl-9H-carbazol-9-yl)-9H-3,9'-bicarbazole)

CAS No. : 1529774-51-3  
Grade : > 98% (HPLC)  
Formula :  $C_{118}H_{120}N_6$   
M.W. : 1622.26 g/mole  
UV : 297, 349 nm (in  $CH_2Cl_2$ )  
PL : 295 nm (in  $CH_2Cl_2$ )

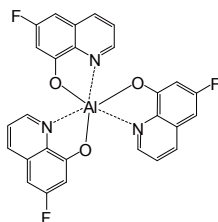
Reference : Advanced Functional Materials (2014), 24(22), 3413-3421



**LT-N4091** | 6FAIq3

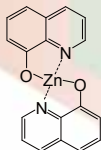
Tris(6-fluoro-8-hydroxy-quinolino)aluminium

CAS No. : 1257308-66-9  
 Grade : > 99% (NMR)  
 Formula :  $C_{27}H_{15}AlF_3N_3O_3$   
 M.W. : 513.4 g/mole  
 UV : 375 nm (in  $CH_2Cl_2$ )  
 PL : 495 nm (in  $CH_2Cl_2$ )  
 TGA : > 220 °C (0.5% weight loss)

Reference : *Chemistry - A European Journal* (2011), 17(33), 9076-9082**LT-N4093** | Znq2

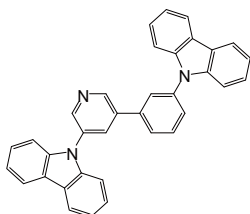
Bis(8-hydroxyquinoline) zinc

CAS No. : 13978-85-3  
 Formula :  $C_{18}H_{12}N_2O_2Zn$   
 M.W. : 353.71 g/mole  
 PL : 465 nm (film)  
 TGA : > 220 °C (0.5% weight loss)

Reference : *Organic Electronics* (2008), 9(5), 625-634**LT-N4094** | CPPyC

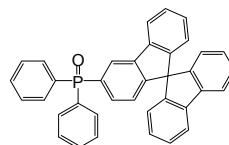
9-(5-(3-(9H-Carbazol-9-yl)phenyl)pyridin-3-yl)-9H-carbazole

CAS No. : 1583238-16-7  
 Grade : > 99% (HPLC)  
 Formula :  $C_{35}H_{23}N_3$   
 M.W. : 485.58 g/mole  
 TGA : > 200 °C (0.5% weight loss)

Reference : *Chemistry of Materials* (2014), 26(7), 2368-2373**LT-N4096** | SF3PO

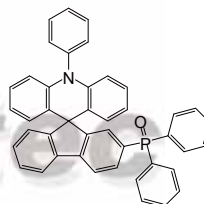
Bis(9,9-spirobifluorene-3-yl)-phenylphosphane oxide

CAS No. : 1454615-69-0  
 Grade : > 99% (HPLC)  
 Formula :  $C_{37}H_{25}OP$   
 M.W. : 516.57 g/mole  
 UV : 308, 314 nm (in  $CH_2Cl_2$ )  
 PL : 322 nm (in  $CH_2Cl_2$ )  
 TGA : > 200 °C (0.5% weight loss)

Reference : *Organic Electronics* (2013), 14(7), 1924-1930**LT-N4108** | POSTF

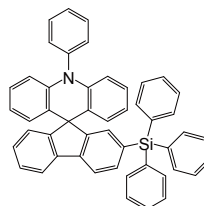
2'-(diphenylphosphoryl)-10-phenyl-10H-spiro[acridine-9,9'-fluorene]

Formula :  $C_{43}H_{30}NOP$   
 M.W. : 607.68 g/mole

**LT-N4110** | SSTF

10-Phenyl-2'-(triphenylsilyl)-10H-spiro[acridine-9,9'-fluorene]

CAS No. : 1454372-37-2  
 Formula :  $C_{49}H_{35}NSi$   
 M.W. : 665.89 g/mole



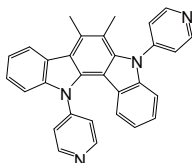
# Organic Light Emitting Diode (OLED)

## Fluorescent Host Materials

### LT-N4113 | 4ICDPy

Indolo[3,2-a]carbazole, 5,12-dihydro-6,7-dimethyl-5,12-di-4-pyridinyl

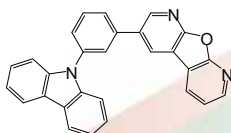
CAS No. : 1803246-66-3  
Formula :  $C_{30}H_{22}N_4$   
M.W. : 438.52 g/mole



### LT-N4114 | 3CzPFP

3-[3-(9H-carbazol-9-yl)phenyl]furo[2,3-b:5,4-b']dipyridine

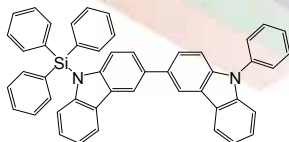
CAS No. : 1443793-91-6  
Formula :  $C_{28}H_{17}N_3O$   
M.W. : 411.45 g/mole



### LT-N4122 | BCz-Si

9-Phenyl-9'-(triphenylsilyl)-9H,9'H-3,3'-bicarbazole

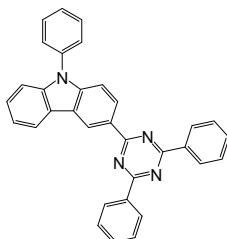
CAS No. : 1770916-57-8  
Formula :  $C_{48}H_{34}N_2Si$   
M.W. : 666.88 g/mole



### LT-N4126 | DPTPCz

3-(4,6-Diphenyl-1,3,5-triazin-2-yl)-9-phenyl-9H-carbazole

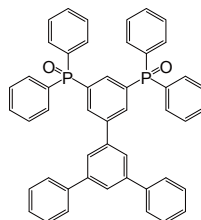
CAS No. : 1313391-57-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{33}H_{22}N_4$   
M.W. : 706.75 g/mole



### LT-N4127 | POPH

(5-Terphenyl-1,3-phenylene)bis(diphenylphosphine oxide)

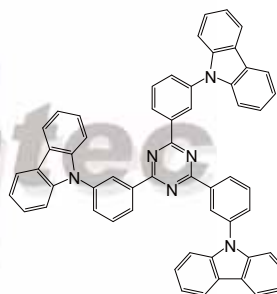
CAS No. : 1818448-28-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{48}H_{36}O_2P_2$   
M.W. : 706.75 g/mole



### LT-N4128 | TCPZ

2,4,6-Tris(3-(9H-carbazol-9-yl)phenyl)-1,3,5-triazine

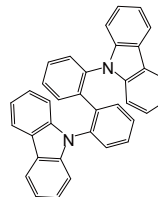
CAS No. : 890148-68-2  
Grade : Sublimed, > 99%  
Formula :  $C_{57}H_{36}N_6$   
M.W. : 804.94 g/mole



### LT-N4129 | o-CBP

2,2'-Di(9H-carbazol-9-yl)biphenyl

CAS No. : 592551-54-7  
Grade : Sublimed, > 99%  
Formula :  $C_{36}H_{24}N_2$   
M.W. : 484.59 g/mole





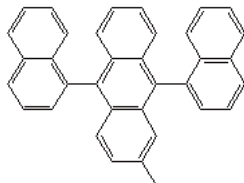
# Organic Light Emitting Diode (OLED)

## Fluorescent Host Materials

### LT-N4151 | MAD-1N

*2-Methyl-9,10-di(naphthalen-1-yl)anthracene*

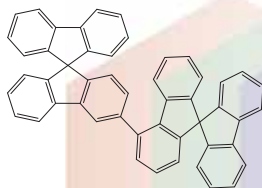
CAS No. : 863497-34-1  
Grade : Sublimed, >99% (HPLC)  
Formula :  $C_{35}H_{24}$   
M.W. : 444.57 g/mole



### LT-N4152 | SF34

*Synthesis of 3-(9,9'-spirofluorenyl-4-yl)-9,9'-spirofluorene*

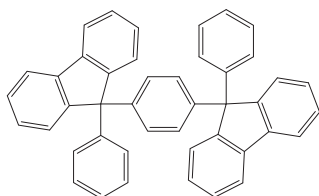
CAS No. : 1799329-54-6  
Grade : Sublimed, >99% (HPLC)  
Formula :  $C_{50}H_{30}$   
M.W. : 630.77 g/mole



### LT-N4154 | pDPFB

*1,4-bis(9-phenyl-9H-fluoren-9-yl)benzene*

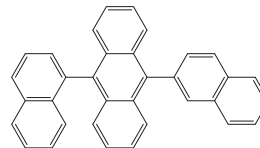
CAS No. : 1138331-98-2  
Grade : Sublimed, >99%  
Formula :  $C_{44}H_{30}$   
M.W. : 558.71 g/mole



### LT-N4156 |

*9-(naphthalen-1-yl)-10-(naphthalen-2-yl)anthracene*

CAS No. : 855828-36-3  
Grade : Sublimed, >99% (HPLC)  
Formula :  $C_{34}H_{22}$   
M.W. : 430.54 g/mole

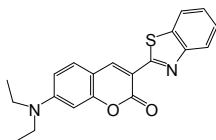


Lumtec

**LT-E501** | Coumarin 6

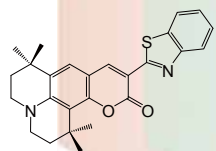
3-(2-Benzothiazolyl)-7-(diethylamino)coumarin

CAS No.	: 38215-36-0
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>20</sub> H <sub>18</sub> N <sub>2</sub> O <sub>2</sub> S
M.W.	: 350.43 g/mole
UV	: 443 nm (in THF)
PL	: 493 nm (in THF)
TGA	: > 260 °C (0.5% weight loss)

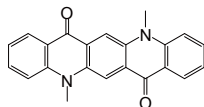
**LT-E502** | C545T

2,3,6,7-Tetrahydro-1,1,7,7-tetramethyl-1H,5H,11H-10-(2-benzothiazolyl)quinolizino[9,9a,1gh]coumarin

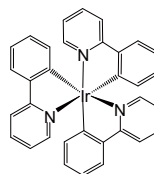
CAS No.	: 155306-71-1
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>26</sub> H <sub>26</sub> N <sub>2</sub> O <sub>2</sub> S
M.W.	: 430.56 g/mole
UV	: 473 nm (in THF)
PL	: 506 nm (in THF)
TGA	: > 240 °C (0.5% weight loss)

**LT-E503** | DMQA*N,N'*-Dimethyl-quinacridone

CAS No.	: 19205-19-7
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>22</sub> H <sub>16</sub> N <sub>2</sub> O <sub>2</sub>
M.W.	: 340.37 g/mole
UV	: 294, 510 nm (in THF)
PL	: 523 nm (in THF)
TGA	: > 300 °C (0.5% weight loss)

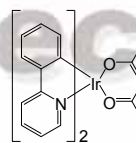
**LT-E504** | *fac*-Ir(ppy)<sub>3</sub>*fac*-Tris(2-phenylpyridine)iridium(III)

CAS No.	: 94928-86-6
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>33</sub> H <sub>24</sub> IrN <sub>3</sub>
M.W.	: 654.78 g/mole
UV	: 282, 377 nm (in THF)
PL	: 513 nm (in THF)
TGA	: > 300 °C (0.5% weight loss)

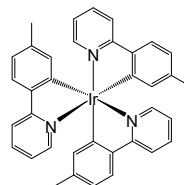
**LT-E505** | Ir(ppy)<sub>2</sub>(acac)

Bis(2-phenylpyridine)(acetylacetonate)iridium(III)

CAS No.	: 337526-85-9
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>27</sub> H <sub>23</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 599.70 g/mole
UV	: 259 nm (in THF)
PL	: 524 nm (in THF)
TGA	: > 270 °C (0.5% weight loss)

**LT-N506** | Ir(mppy)<sub>3</sub>Tris[2-(*p*-tolyl)pyridine]iridium(III)

CAS No.	: 149005-33-4
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>36</sub> H <sub>30</sub> IrN <sub>3</sub>
M.W.	: 696.86 g/mole
UV	: 287, 373 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 514 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 330 °C (0.5% weight loss)

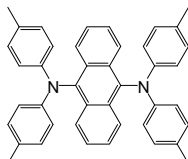
Reference: *Appl. Phys. Lett.*, Vol. 84, No. 14, 5 April 2004, 2476~2478.

### LT-N507 | TTPA

9,10-Bis[*N,N*-di-(*p*-tolyl)-amino]anthracene

CAS No. : 177799-16-5  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{42}H_{36}N_2$   
 M.W. : 568.75 g/mole  
 UV : 294, 471 nm (in  $CH_2Cl_2$ )  
 PL : 554 nm (in  $CH_2Cl_2$ )  
 TGA : > 280 °C (0.5% weight loss)

Reference : *Chem. Mater.*, 2002, 14, 3958~3963.

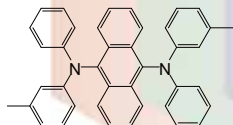


### LT-N508 | TPA

9,10-Bis[phenyl(*m*-tolyl)-amino]anthracene

CAS No. : 189263-81-8  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{40}H_{32}N_2$   
 M.W. : 540.70 g/mole  
 UV : 292, 458 nm (in  $CH_2Cl_2$ )  
 PL : 532 nm (in  $CH_2Cl_2$ )  
 TGA : > 270 °C (0.5% weight loss)

Reference : *Chem. Mater.*, 2002, 14, 3958~3963.

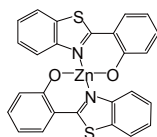


### LT-N509 | Zn(BTZ)<sub>2</sub>

Bis[2-(2-hydroxyphenyl)benzothiazolato]zinc(II)

CAS No. : 58280-31-2  
 Grade : Sublimed, > 99%  
 Formula :  $C_{26}H_{16}N_2O_2S_2Zn$   
 M.W. : 517.96 g/mole  
 UV : 287, 334 nm (in  $CH_2Cl_2$ )  
 PL : 458 nm (in  $CH_2Cl_2$ )  
 TGA : > 300 °C (0.5% weight loss)

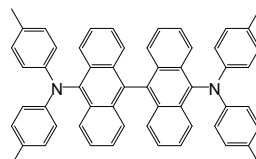
Reference : *Current Applied Physics*, 2 (2002), 295~298.



### LT-N510 | BA-TTB

*N*<sup>10</sup>,*N*<sup>10</sup>,*N*<sup>10'</sup>,*N*<sup>10'</sup>-Tetra-tolyl-9,9'-bianthracene-10,10'-diamine

CAS No. : 223735-62-4  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{56}H_{44}N_2$   
 M.W. : 744.96 g/mole  
 UV : 257 nm (in  $CH_2Cl_2$ )  
 PL : 546 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)



### LT-N511 | BA-TAD

*N*<sup>10</sup>,*N*<sup>10</sup>,*N*<sup>10'</sup>,*N*<sup>10'</sup>-Tetraphenyl-9,9'-bianthracene-10,10'-diamine

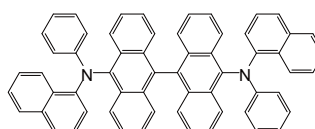
CAS No. : 220721-68-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{52}H_{36}N_2$   
 M.W. : 688.86 g/mole  
 UV : 257 nm (in  $CH_2Cl_2$ )  
 PL : 518 nm (in  $CH_2Cl_2$ )  
 TGA : > 300 °C (0.5% weight loss)



### LT-N512 | BA-NPB

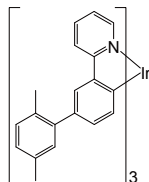
*N*<sup>10</sup>,*N*<sup>10'</sup>-Diphenyl-*N*<sup>10</sup>,*N*<sup>10'</sup>-dinaphthalenyl-9,9'-bianthracene-10,10'-diamine

CAS No. : 885502-26-1  
 Grade : Sublimed, > 95% (HPLC)  
 Formula :  $C_{60}H_{40}N_2$   
 M.W. : 788.97 g/mole  
 UV : 357, 441 nm (in  $CH_2Cl_2$ )  
 PL : 517 nm (in  $CH_2Cl_2$ )  
 TGA : > 340 °C (0.5% weight loss)

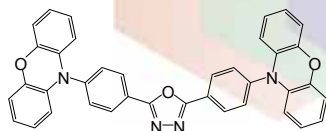


**LT-N522** | TEG*fac*-Tris(2-(3-*p*-xylyl)phenyl)pyridine iridium(III)

CAS No. : 1338784-40-9  
 Grade : > 99% (HPLC)  
 Formula :  $C_{57}H_{48}IrN_3$   
 M.W. : 967.3 g/mole  
 UV : 400 nm (in film)  
 PL : 539 nm (in film)  
 TGA : > 250 °C (0.5% weight loss)

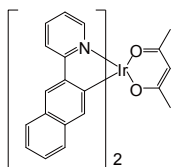
Reference : *Appl. Phys. Lett.* 91, 103507(2007)**LT-N528** | 2PXZ-OXD2,5-Bis(4-(10*H*-phenoxazin-10-yl)phenyl)-1,3,4-oxadiazole

CAS No. : 1447998-13-1  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{38}H_{24}N_4O_3$   
 M.W. : 584.62 g/mole  
 UV : 291 nm (in Toluene)  
 PL : 501.5 nm (in Toluene)  
 TGA : > 270 °C (0.5% weight loss)

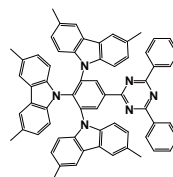
Reference : *Journal of Materials Chemistry C: Materials for Optical and Electronic Devices* (2013), 1(30), 4599-4604**LT-N529** | Ir(np<sub>y</sub>)<sub>2</sub>acac

Bis(2-(naphthalen-2-yl)pyridine)(acetylacetonate) iridium(III)

CAS No. : 878393-09-0  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{35}H_{27}IrN_2O_2$   
 M.W. : 699.82 g/mole  
 TGA : > 270 °C (0.5% weight loss)

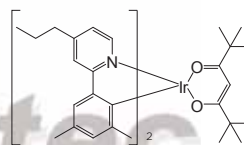
Reference : *Appl. Phys. Lett.* 91, 103507(2007)**LT-N548** | TmCzTrz9,9',9''-(5-(4,6-diphenyl-1,3,5-triazin-2-yl)benzene-1,2,3-triyl)tris(3,6-dimethyl-9*H*-carbazole)

CAS No. : 1808158-41-9  
 Formula :  $C_{63}H_{48}N_6$   
 M.W. : 889.1 g/mole

**LT-N562** | Ir(dmppy-pro)2tmd

Bis(2-(3,5-dimethylphenyl)-4-propylpyridine)(2,2,6,6-tetramethylheptane-3,5-diketonate)iridium(III)

CAS No. : 2050041-60-4  
 Grade : Sublimed, >99 % (HPLC)  
 Formula :  $C_{43}H_{55}IrN_2O_2$   
 M.W. : 824.14 g/mole  
 UV : 263,373,441 nm (in CHCl<sub>3</sub>)

**LT-N564** | BPTAPA

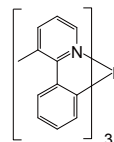
N10,N10'-bis(4-isopropylphenyl)-N10,N10'-dip-tolyl-9,9'-bianthracene-10,10'-diamine

CAS No. : 1848973-32-9  
 Grade : Sublimed, >99% (HPLC)  
 Formula :  $C_{60}H_{52}N_2$   
 M.W. : 801.07 g/mole

**LT-N5002** | Ir(3mppy)<sub>3</sub>

Tris(2-phenyl-3-methyl-pyridine)iridium

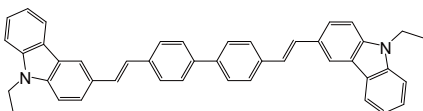
CAS No. : 639006-72-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{36}H_{30}IrN_3$   
 M.W. : 696.86 g/mole  
 UV : 283, 383 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 522 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 280 °C (0.5% weight loss)



### LT-E601 | BCzVBi

4,4'-Bis(9-ethyl-3-carbazovinyleno)-1,1'-biphenyl

CAS No. : 475480-90-1  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{44}H_{36}N_2$   
 M.W. : 592.77 g/mole  
 UV : 384 nm (in THF)  
 PL : 438 nm (in THF)  
 TGA : > 390 °C (0.5% weight loss)



### LT-E602 | Perylene

Perylene

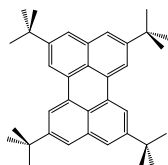
CAS No. : 198-55-0  
 Grade : Sublimed, > 99.5% (HPLC)  
 Formula :  $C_{20}H_{12}$   
 M.W. : 252.31 g/mole  
 UV : 410, 436 nm (in THF)  
 PL : 471 nm (in THF)  
 TGA : > 200 °C (0.5% weight loss)



### LT-E603 | TBPe

2,5,8,11-Tetra-*tert*-butylperylene

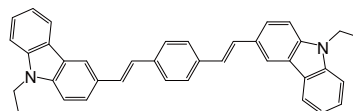
CAS No. : 80663-92-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{36}H_{44}$   
 M.W. : 476.73 g/mole  
 UV : 412, 438 nm (in THF)  
 PL : 487 nm (in THF)  
 TGA : > 220 °C (0.5% weight loss)



### LT-E604 | BCzVB

1,4-Bis[2-(3-*N*-ethylcarbazoryl)vinyl]benzene

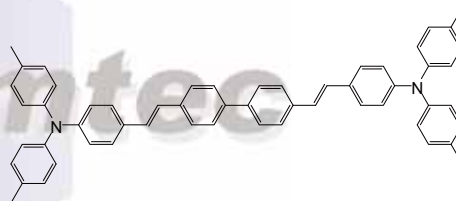
CAS No. : 62608-15-5  
 Grade : > 99% (HPLC)  
 Formula :  $C_{38}H_{32}N_2$   
 M.W. : 516.67 g/mole  
 UV : 391 nm (in THF)  
 PL : 476 nm (in THF)  
 TGA : > 360 °C (0.5% weight loss)



### LT-E605 | DPAVBi

4,4'-Bis[4-(di-*p*-tolylamino)styryl]biphenyl

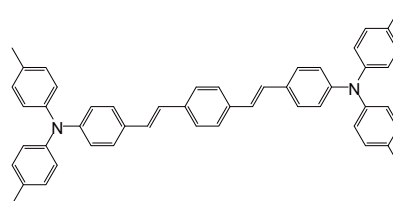
CAS No. : 119586-44-6  
 Grade : > 99% (HPLC)  
 Formula :  $C_{56}H_{48}N_2$   
 M.W. : 748.99 g/mole  
 UV : 405 nm (in THF)  
 PL : 475 nm (in THF)  
 TGA : > 320 °C (0.5% weight loss)



### LT-E606 | DPAVB

4-(Di-*p*-tolylamino)-4'-[(di-*p*-tolylamino)styryl]stilbene

CAS No. : 596103-58-1  
 Grade : > 99% (HPLC)  
 Formula :  $C_{50}H_{44}N_2$   
 M.W. : 672.90 g/mole  
 UV : 414 nm (in THF)  
 PL : 476 nm (in THF)  
 TGA : > 340 °C (0.5% weight loss)



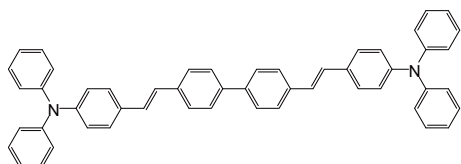
# Organic Light Emitting Diode (OLED)

## Blue Dopant Materials

### LT-E608 | BDAVBi

4,4'-Bis[4-(diphenylamino)styryl]biphenyl

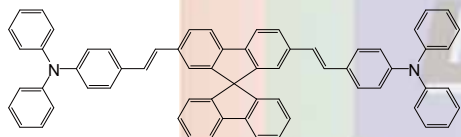
CAS No. : 523977-57-3  
Grade : > 99% (HPLC)  
Formula :  $C_{52}H_{40}N_2$   
M.W. : 692.89 g/mole  
UV : 399 nm (in THF)  
PL : 466 nm (in THF)  
TGA : > 360 °C (0.5% weight loss)



### LT-N446 | Spiro-BDAVBi

2,7-Bis[4-(diphenylamino)styryl]-9,9-spirobifluorene

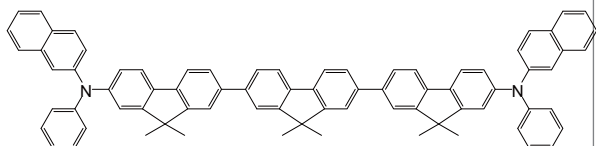
CAS No. : 436798-89-9  
Grade : > 99% (HPLC)  
Formula :  $C_{65}H_{46}N_2$   
M.W. : 855.07 g/mole  
UV : 414 nm (in  $CH_2Cl_2$ )  
PL : 482 nm (in  $CH_2Cl_2$ )  
TGA : > 390 °C (0.5% weight loss)



### LT-N623 | BNP3FL

*N,N'*-Bis(naphthalen-2-yl)-*N,N'*-bis(phenyl)-tris-(9,9-dimethylfluorenylene)

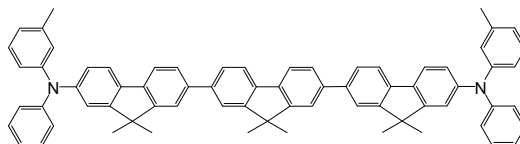
CAS No. : 669016-17-5  
Grade : > 99% (HPLC)  
Formula :  $C_{77}H_{60}N_2$   
M.W. : 1013.31 g/mole  
UV : 387 nm (in THF)  
PL : 437 nm (in THF)  
TGA : > 450 °C (0.5% weight loss)



### LT-N624 | MDP3FL

2,7-Bis(2-[phenyl(*m*-tolyl)amino]-9,9-dimethyl-fluorene-7-yl)-9,9-dimethyl-fluorene

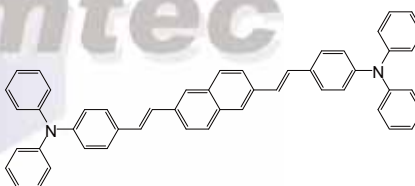
CAS No. : 239476-24-5  
Grade : > 99% (HPLC)  
Formula :  $C_{71}H_{60}N_2$   
M.W. : 941.25 g/mole  
UV : 385 nm (in  $CH_2Cl_2$ )  
PL : 460 nm (in  $CH_2Cl_2$ )  
TGA : > 430 °C (0.5% weight loss)



### LT-N627 | N-BDAVBi

*N*-(4-((*E*)-2-(6-((*E*)-4-(Diphenylamino)styryl)naphthalen-2-yl)vinyl)phenyl)-*N*-phenylbenzenamine

CAS No. : 1032556-63-0  
Grade : > 99% (HPLC)  
Formula :  $C_{50}H_{38}N_2$   
M.W. : 666.85 g/mole  
UV : 407 nm (in THF)  
PL : 469 nm (in THF)  
TGA : > 370 °C (0.5% weight loss)

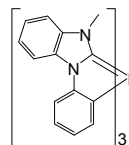


### LT-N629 | fac-Ir(Pmb)<sub>3</sub>

*fac*-Iridium(III) tris(1-phenyl-3-methylbenzimidazolin-2-ylidene-*C,C'*)

CAS No. : 1542678-40-9  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{52}H_{33}IrN_6$   
M.W. : 813.96 g/mole  
UV : 299 nm (in THF)  
PL : 405 nm (in THF)  
TGA : > 330 °C (0.5% weight loss)

Reference : *Applied Physics Letters*, 87, 243507, 2005.

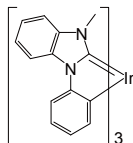


### LT-N630 | *mer*-Ir(Pmb)<sub>3</sub>

*mer*-Iridium(III) tris(1-phenyl-3-methylbenzimidazolin-2-ylidene-*C,C'*)

CAS No. : 926292-95-7  
 Grade : > 99% (HPLC)  
 Formula : C<sub>42</sub>H<sub>33</sub>IrN<sub>6</sub>  
 M.W. : 813.96 g/mole  
 UV : 303 nm (in THF)  
 PL : 415 nm (in THF)  
 TGA : > 280 °C (0.5% weight loss)

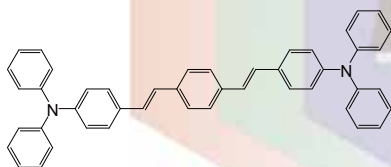
Reference : *Applied Physics Letters*, 87, 243507, 2005.



### LT-N631 | DSA-Ph

1-4-Di-[4-(*N,N*-diphenyl)amino]styryl-benzene

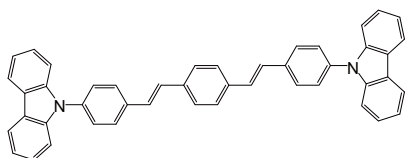
CAS No. : 358374-59-1  
 Grade : > 99% (HPLC)  
 Formula : C<sub>46</sub>H<sub>36</sub>N<sub>2</sub>  
 M.W. : 616.79 g/mole  
 UV : 409 nm (in Toluene)  
 PL : 459, 487 nm (in Toluene)  
 TGA : > 320 °C (0.5% weight loss)



### LT-N632 | BCzSB

1,4-Bis(4-(9*H*-carbazol-9-yl)styryl)benzene

CAS No. : 320575-30-2  
 Grade : > 99%  
 Formula : C<sub>46</sub>H<sub>32</sub>N<sub>2</sub>  
 M.W. : 612.76 g/mole  
 UV : 375 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 461 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 310 °C (0.5% weight loss)

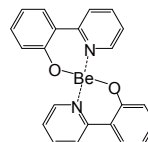


### LT-N634 | Bepp<sub>2</sub>

Bis(2-(2-hydroxyphenyl)-pyridine)beryllium

CAS No. : 220694-90-6  
 Grade : Sublimed, > 99%  
 Formula : C<sub>22</sub>H<sub>16</sub>BeN<sub>2</sub>O<sub>2</sub>  
 M.W. : 349.39 g/mole  
 PL : 445 nm (in CHCl<sub>3</sub>)  
 TGA : > 250 °C (0.5% weight loss)

Reference : 1. *Chem. Mater.*, 2000, 12 (9), pp 2672-2675  
 2. *J. Mater. Chem.*, 2011, 21, 3551

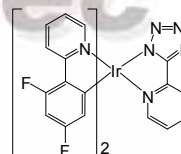


### LT-N635 | FlrN4

Bis(2,4-difluorophenylpyridinato)(5-(pyridin-2-yl)-1*H*-tetrazolate) iridium(III)

CAS No. : 1219078-44-0  
 Grade : > 99% (HPLC)  
 Formula : C<sub>28</sub>H<sub>16</sub>F<sub>4</sub>IrN<sub>7</sub>  
 M.W. : 718.67 g/mole  
 UV : 368 nm (in THF)  
 PL : 459 nm (in THF)  
 TGA : > 270 °C (0.5% weight loss)

Reference : *Adv. Mater.*, 17, 285, 2005

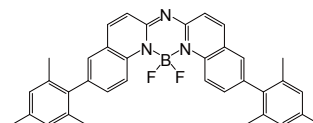


### LT-N642 | MQAB

(*Z*)-6-Mesityl-*N*-(6-mesitylquinolin-2(1*H*)-ylidene)quinolin-2-amine-BF<sub>2</sub> complex

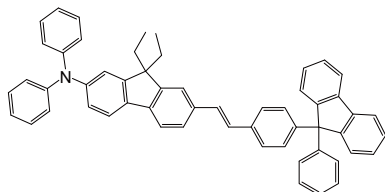
CAS No. : 1338788-44-5  
 Grade : > 99% (HPLC)  
 Formula : C<sub>36</sub>H<sub>32</sub>BF<sub>2</sub>N<sub>3</sub>  
 M.W. : 555.47 g/mole  
 UV : 338 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 476 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 280 °C (0.5% weight loss)

Reference : *Organic Electronics* 12(2011) 666-676

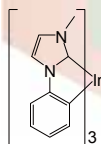


**LT-N645** | DPAFVF9-[4-(2-(7-(*N,N*-Diphenylamino)-9,9-diethylfluoren-2-yl)vinyl)phenyl]-9-phenyl-fluorene

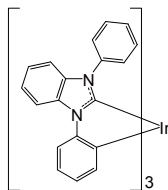
CAS No. : 1239588-65-8  
 Grade : > 99% (HPLC)  
 Formula :  $C_{56}H_{45}N$   
 M.W. : 731.96 g/mole  
 UV : 386 nm (in  $CH_2Cl_2$ )  
 PL : 465 nm (in  $CH_2Cl_2$ )  
 TGA : > 260 °C (0.5% weight loss)  
 Reference : *Synthetic Metals* 160 (2010) 1259-1265

**LT-N646** | *mer*-Ir(pmi)<sub>3</sub>*mer*-Tris(1-phenyl-3-methylimidazolin-2-ylidene-*C,C*(2') iridium(III))

CAS No. : 870009-65-7  
 Grade : > 99% (HPLC)  
 Formula :  $C_{30}H_{27}IrN_6$   
 M.W. : 663.85 g/mole  
 UV : 267 nm (in  $CH_2Cl_2$ )  
 PL : 410 nm (in  $CH_2Cl_2$ )  
 TGA : > 250 °C (0.5% weight loss)

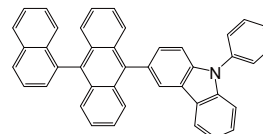
**LT-N658** | *fac*-Ir(dpbc)<sub>3</sub>*fac*-Tris(1,3-diphenyl-benzimidazolin-2-ylidene-*C,C*(2') iridium(III))

CAS No. : 888725-36-8  
 Grade : > 99% (HPLC)  
 Formula :  $C_{57}H_{42}IrN_6$   
 M.W. : 1003.2 g/mole  
 UV : 281, 302 nm (in  $CH_2Cl_2$ )  
 PL : 472 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)

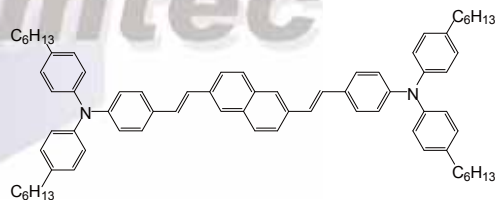
**LT-N662** | PCAN

9-(9-Phenylcarbazole-3-yl)-10-(naphthalene-1-yl)anthracene

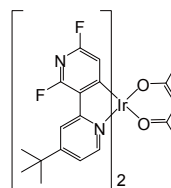
CAS No. : 1261580-75-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{42}H_{27}N$   
 M.W. : 545.67 g/mole  
 UV : 244, 397 nm (in  $CH_2Cl_2$ )  
 PL : 441 nm (in  $CH_2Cl_2$ )  
 TGA : > 330 °C (0.5% weight loss)  
 Reference : *J. Mater. Chem.*, 2012, 22, 123-129

**LT-N663** | N-BDAVBi-C64,4'-(1*E*,1'*E*)-2,2'-(Naphthalene-2,6-diyl)bis(ethene-2,1-diyl)bis(*N,N*-bis(4-hexylphenyl)aniline)

CAS No. : 1258522-36-9  
 Grade : > 99% (HPLC)  
 Formula :  $C_{74}H_{66}N_2$   
 M.W. : 1003.49 g/mole  
 UV : 407 nm (in THF)  
 PL : 469 nm (in THF)

Reference : *Organic Electronics* (2009), 10, (8), 1610-1614**LT-N669** | FK306Bis[4-*tert*-butyl-2',6'-difluoro-2,3'-bipyridine](acetylacetonate)iridium(III)

CAS No. : 1421058-47-0  
 Grade : > 99% (HPLC)  
 Formula :  $C_{33}H_{33}F_4IrN_2O_2$   
 M.W. : 785.85 g/mole  
 UV : 244 nm (in  $CH_2Cl_2$ )  
 PL : 454 nm (in  $CH_2Cl_2$ )  
 TGA : > 280 °C (0.5% weight loss)  
 Reference : *J. Mater. Chem. C*, 2013, 1, 1070-1075

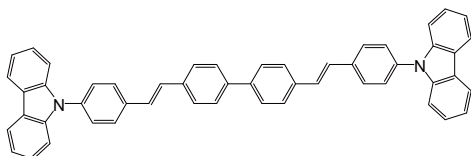




**LT-S9058** | BSB4

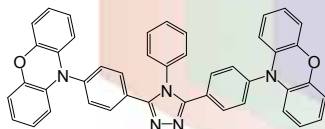
4,4'-Bis(4-(9H-carbazol-9-yl)styryl)biphenyl

CAS No.	: 850594-34-2
Grade	: Sublimed, > 99%
Formula	: C <sub>22</sub> H <sub>26</sub> N <sub>2</sub>
M.W.	: 688.86 g/mole
UV	: 253, 367 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 452 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 320 °C (0.5% weight loss)

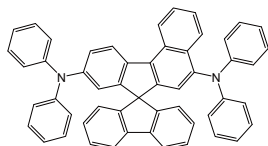
**LT-N675** | 2PXZ-TAZ

10,10'-(4,4'-(4-Phenyl-4H-1,2,4-triazole-3,5-diyl)bis(4,1-phenylene))bis(10H-phenoxazine)

CAS No.	: 1447998-15-3
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>44</sub> H <sub>29</sub> N <sub>5</sub> O <sub>2</sub>
M.W.	: 659.73 g/mole
UV	: 473 nm (in Toluene)
PL	: 462 nm
ΔEST	: 0.86 eV
TGA	: > 300 °C (0.5% weight loss)

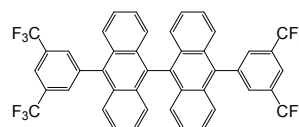
Reference: *J. Mater. Chem. C*, 2013, 1, 4599**LT-N677** | TPA-SBFFN<sup>6</sup>,N<sup>6</sup>,N<sup>6</sup>,N<sup>6</sup>-tetraphenylspiro[benzo[c]fluorene-7,9'-fluorene]-5,9-diamine

CAS No.	: 1262333-45-8
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>53</sub> H <sub>36</sub> N <sub>2</sub>
M.W.	: 700.87 g/mole

**LT-N678** | Ban-(3,5)-CF3

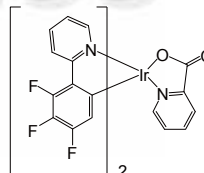
10,10'-Bis(3,5-bis(trifluoromethyl)phenyl)-9,9'-bianthracene

CAS No.	: 1505456-00-7
Grade	: > 99% (HPLC)
Formula	: C <sub>44</sub> H <sub>22</sub> F <sub>12</sub>
M.W.	: 778.63 g/mole
UV	: 259, 400 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 440 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 270 °C (0.5% weight loss)

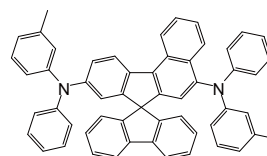
Reference: *Journal of Materials Chemistry C: Materials for Optical and Electronic Devices* (2013), 1(48), 8117-8127**LT-N679** | Ir(tfpd)<sub>2</sub>pic

Bis(3,4,5-trifluoro-2-(2-pyridyl)phenyl)-(2-carboxypyridyl)iridium(III)

CAS No.	: 1417790-60-3
Grade	: > 99% (HPLC)
Formula	: C <sub>28</sub> H <sub>14</sub> F <sub>6</sub> IrN <sub>3</sub> O <sub>2</sub>
M.W.	: 730.64 g/mole
UV	: 254 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 483 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 280 °C (0.5% weight loss)

Reference: *Dyes and Pigments* (2013), 96(1), 237-241**LT-N680** | BD-6MDPAN<sup>6</sup>,N<sup>6</sup>-Diphenyl-N<sup>6</sup>,N<sup>6</sup>-di-m-tolylspiro[benzo[c]fluorene-7,9'-fluorene]-5,9-diamine

CAS No.	: 1262281-91-3
Grade	: > 99% (HPLC)
Formula	: C <sub>55</sub> H <sub>40</sub> N <sub>2</sub>
M.W.	: 728.92 g/mole
UV	: 408 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 468 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 220 °C (0.5% weight loss)



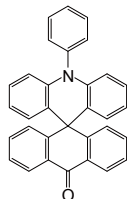
# Organic Light Emitting Diode (OLED)

## Blue Dopant Materials

### LT-N681 | ACRSA

10-Phenyl-10*H*,10'*H*-spiro[acridine-9,9'-anthracen]-10'-one

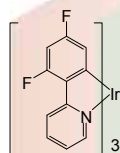
CAS No. : 1206626-95-0  
Formula : C<sub>32</sub>H<sub>21</sub>NO  
M.W. : 435.52 g/mole



### LT-N697 | Ir(Fppy)<sub>3</sub>

Tris(2-(4,6-difluorophenyl)pyridine)iridium(III)

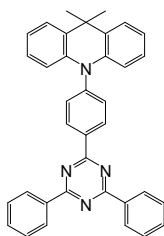
CAS No. : 387859-70-3  
Grade : > 99% (HPLC)  
Formula : C<sub>33</sub>H<sub>18</sub>F<sub>6</sub>IrN<sub>3</sub>  
M.W. : 762.72 g/mole  
UV : 262 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
PL : 493 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
TGA : > 250 °C (0.5% weight loss)



### LT-N699 | DMAC-TRZ

10-(4-(4,6-diphenyl-1,3,5-triazin-2-yl)phenyl)-9,9-dimethyl-9,10-dihydroacridine

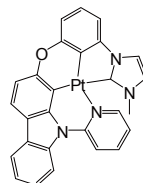
CAS No. : 1628752-98-6  
Formula : C<sub>36</sub>H<sub>28</sub>N<sub>4</sub>  
M.W. : 516.63 g/mole



### LT-N6004 | PtON7

2-(3-(3-methyl-2,3-dihydro-1*H*-imidazol-1-yl)phenoxy)-9-(pyridin-2-yl)-9*H*-carbazoleplatinum(II)

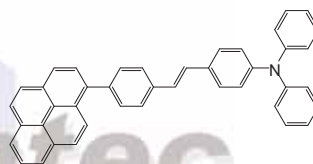
CAS No. : 1448175-22-1  
Grade : > 99% (HPLC)  
Formula : C<sub>27</sub>H<sub>19</sub>N<sub>4</sub>OPt  
M.W. : 610.12 g/mole



### LT-N6015 | DPASP

(*E*)-*N,N*-diphenyl-4-(4-(pyren-1-yl)styryl)aniline

CAS No. : 2005434-89-7  
Grade : > 99% (HPLC)  
Formula : C<sub>42</sub>H<sub>29</sub>N  
M.W. : 547.69 g/mole

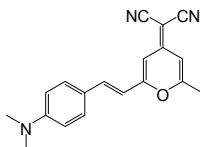


### LT-E701 | DCM

(E)-2-(2-(4-(Dimethylamino)styryl)-6-methyl-4H-pyran-4-ylidene)malononitrile

CAS No. : 51325-91-8  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{19}H_{17}N_3O$   
 M.W. : 303.36 g/mole  
 UV : 462 nm (in THF)  
 PL : 577 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)

Reference : *Appl. Phys. Lett.* 79, 7, P1045-1047, 2001.

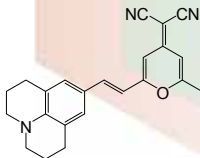


### LT-E702 | DCM2

4-(Dicyanomethylene)-2-methyl-6-julolidyl-9-enyl-4H-pyran

CAS No. : 51325-95-2  
 Grade : > 99% (HPLC)  
 Formula :  $C_{23}H_{21}N_3O$   
 M.W. : 355.43 g/mole  
 UV : 497 nm (in THF)  
 PL : 605 nm (in THF)  
 TGA : > 230 °C (0.5% weight loss)

Reference : *Chem. Phys. Lett.* 287, 3-4, 455-460, 1998.

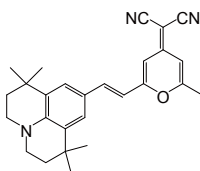


### LT-E703 | DCJT

4-(Dicyanomethylene)-2-methyl-6-(1,1,7,7-tetramethyljulolidyl-9-enyl)-4H-pyran

CAS No. : 159788-00-8  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{27}H_{29}N_3O$   
 M.W. : 411.54 g/mole  
 UV : 497 nm (in THF)  
 PL : 604 nm (in THF)  
 TGA : > 270 °C (0.5% weight loss)

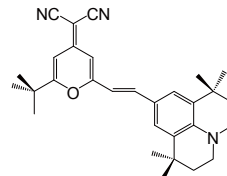
Reference : *Proc. 2nd Internat. Sym. Chem. Functional Dyes*, 1992, 536.



### LT-E704 | DCJTb

4-(Dicyanomethylene)-2-tert-butyl-6-(1,1,7,7-tetramethyljulolidin-4-yl-vinyl)-4H-pyran

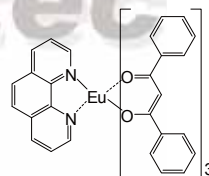
CAS No. : 200052-70-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{30}H_{35}N_3O$   
 M.W. : 453.62 g/mole  
 UV : 501 nm (in THF)  
 PL : 602 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)



### LT-E706 | Eu(dbm)<sub>3</sub>(Phen)

Tris(dibenzoylmethane)phenanthroline europium(III)

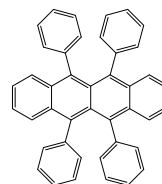
CAS No. : 17904-83-5  
 Grade : Sublimed, > 99%  
 Formula :  $C_{57}H_{41}N_2O_6Eu$   
 M.W. : 1001.93 g/mole  
 UV : 257, 355 nm (in THF)  
 PL : 615 nm (in THF)  
 TGA : > 180 °C (0.5% weight loss)



### LT-E707 | Rubrene

5,6,11,12-Tetraphenylnaphthacene

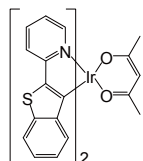
CAS No. : 517-51-1  
 Grade : Sublimed, > 99%  
 Formula :  $C_{22}H_{18}$   
 M.W. : 532.67 g/mole  
 UV : 299 nm (in THF)  
 PL : 553 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)



**LT-E709** | Ir(btpp)<sub>2</sub>(acac)

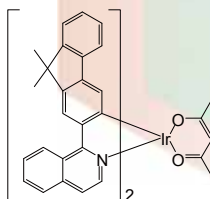
Bis(2-benzo[b]thiophen-2-yl-pyridine)(acetylacetonate) iridium(III)

CAS No.	: 343978-79-0
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>31</sub> H <sub>23</sub> IrN <sub>2</sub> O <sub>2</sub> S <sub>2</sub>
M.W.	: 711.87 g/mole
UV	: 283 nm (in THF)
PL	: 615 nm (in THF)
TGA	: > 310 °C (0.5% weight loss)

**LT-N721** | Ir(fliq)<sub>2</sub>(acac)

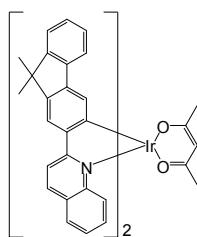
Bis[1-(9,9-dimethyl-9H-fluoren-2-yl)-isoquinoline](acetylacetonate)iridium(III)

CAS No.	: 1617506-77-0
Grade	: Sublimed, > 98.5% (HPLC)
Formula	: C <sub>53</sub> H <sub>43</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 932.14 g/mole
UV	: 285, 368 nm (in THF)
PL	: 653 nm (in THF)
TGA	: > 350 °C (0.5% weight loss)

**LT-N724** | Ir(flq)<sub>2</sub>(acac)

Bis[2-(9,9-dimethyl-9H-fluoren-2-yl)quinoline](acetylacetonate)iridium(III)

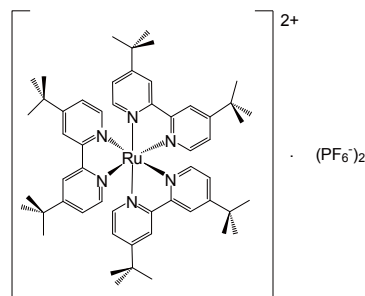
CAS No.	: 889750-25-8
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>53</sub> H <sub>43</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 932.14 g/mole
UV	: 309, 368 nm (in THF)
PL	: 615 nm (in THF)
TGA	: > 320 °C (0.5% weight loss)

**LT-N727** | Ru(dtb-bpy)<sub>3</sub> 2(PF<sub>6</sub>)

Tris[4,4'-di-tert-butyl-(2,2')-bipyridine]ruthenium(III) complex

Grade	: Sublimed, > 99%
Formula	: C <sub>54</sub> H <sub>72</sub> F <sub>12</sub> N <sub>6</sub> P <sub>2</sub> Ru
M.W.	: 1196.19 g/mole
UV	: 289, 462 nm (in THF)
PL	: 614 nm (in THF)
TGA	: > 350 °C (0.5% weight loss)

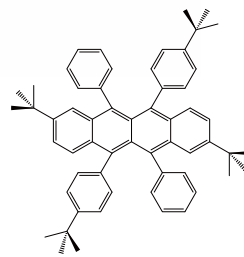
Reference : *Appl. Phys. Lett.* 79, 7, P1045-1047, 2001.

**LT-N732** | TBRb

2,8-Di-tert-butyl-5,11-bis(4-tert-butylphenyl)-6,12-diphenyltetracene

CAS No.	: 682806-51-5
Grade	: Sublimed, > 99%
Formula	: C <sub>58</sub> H <sub>60</sub>
UV	: 306 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 571 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 310 °C (0.5% weight loss)

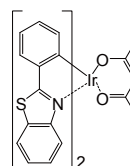
Reference : *Thin Solid Films* 496 (2006) 626-630

**LT-N733** | Ir(BT)<sub>2</sub>(acac)

Bis(2-phenylbenzothiazolato)(acetylacetonate)iridium(III)

CAS No.	: 337526-88-2
Grade	: Sublimed, > 98.5% (HPLC)
Formula	: C <sub>31</sub> H <sub>23</sub> IrN <sub>2</sub> O <sub>2</sub> S <sub>2</sub>
M.W.	: 711.87 g/mole
UV	: 271 nm (in THF)
PL	: 563 nm (in THF)
TGA	: > 270 °C (0.5% weight loss)

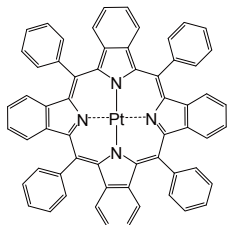
Reference : *Journal of Organometallic Chemistry*, Vol 689, Issue 26, P4882-4888, 2004.



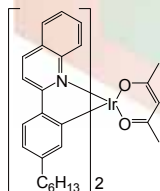
**LT-N734** | Pt(TPBP)

Platinum(II) 5,10,15,20-tetraphenyltetrazabenzoporphyrin

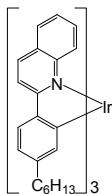
CAS No.	: 166174-05-6
Grade	: > 96% (HPLC)
Formula	: $C_{60}H_{36}N_4Pt$
M.W.	: 1008.03 g/mole
UV	: 430, 610 nm (in THF)
PL	: 765 nm (in THF)
TGA	: > 320 °C (0.5% weight loss)

Reference : *Angew. Chem. Int. Ed.* 2007, 46, 1109–1112**LT-N740** | Hex-Ir(phq)<sub>2</sub>(acac)Bis[2-(4-*n*-hexylphenyl)quinoline](acetylacetonate) iridium(III)

CAS No.	: 1404197-18-7
Grade	: 99% (HPLC)
Formula	: $C_{47}H_{51}IrN_2O_2$
M.W.	: 868.14 g/mole
UV	: 344 nm (in $CH_2Cl_2$ )
PL	: 588 nm (in $CH_2Cl_2$ )
TGA	: > 210 °C (0.5% weight loss)

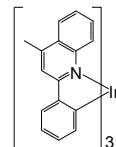
**LT-N741** | Hex-Ir(phq)<sub>3</sub>Tris[2-(4-*n*-hexylphenyl)quinoline]iridium(III)

CAS No.	: 1268460-37-2
Grade	: > 99% (HPLC)
Formula	: $C_{63}H_{66}IrN_3$
M.W.	: 1057.43 g/mole
UV	: 323 nm (in $CH_2Cl_2$ )
PL	: 583 nm (in $CH_2Cl_2$ )
TGA	: > 250 °C (0.5% weight loss)

Reference : *Synthetic Metals* 161 (2011) 148–152**LT-N742** | Ir(Mphq)<sub>3</sub>

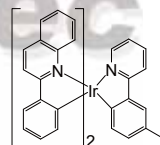
Tris[2-phenyl-4-methylquinoline]iridium(III)

CAS No.	: 1433853-90-7
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{48}H_{36}IrN_3$
M.W.	: 847.04 g/mole
UV	: 259, 270 nm (in $CH_2Cl_2$ )
PL	: 573 nm (in $CH_2Cl_2$ )
TGA	: > 350 °C (0.5% weight loss)

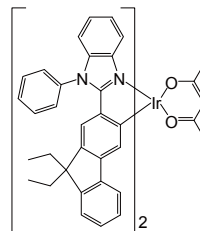
Reference : *Journal of Information Display* Vol. 12, No. 1, March 2011, 51–55**LT-N743** | Ir(phq)<sub>2</sub>tpy

Bis[2-phenylquinoline](2-(3-methylphenyl)pyridinate) iridium(III)

Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{42}H_{30}IrN_3$
M.W.	: 768.93 g/mole
UV	: 256, 271 nm (in $CH_2Cl_2$ )
PL	: 604 nm (in $CH_2Cl_2$ )
TGA	: > 320 °C (0.5% weight loss)

**LT-N744** | Ir(fbi)<sub>2</sub>(acac)Bis[2-(9,9-diethyl-fluoren-2-yl)-1-phenyl-1*H*-benzo[*d*]imidazolato](acetylacetonate)iridium(III)

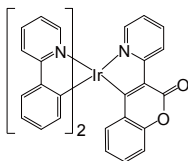
CAS No.	: 725251-24-1
Grade	: > 99% (HPLC)
Formula	: $C_{65}H_{57}IrN_4O_2$
M.W.	: 1118.40 g/mole
UV	: 421 nm (in THF)
PL	: 538 nm (in THF)
TGA	: > 270 °C (0.5% weight loss)

Reference : 1. *Angew. Chem. Int. Ed.* 2008, 47, 581  
2. *Chem. Mater.* 2004, 16, 2480

**LT-N745** | **fac-Ir(ppy)<sub>2</sub>Pc**

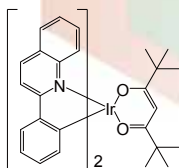
Bis(2-phenylpyridine)(3-(pyridin-2-yl)-2H-chromen-2-onate)iridium(III)

CAS No.	: 100367-98-4
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>36</sub> H <sub>24</sub> IrN <sub>3</sub> O <sub>2</sub>
M.W.	: 722.82 g/mole
UV	: 319 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 550 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 340 °C (0.5% weight loss)

Reference : *Thin Solid Films* 496 (2006) 626~630**LT-N746** | **Ir(dpm)PQ<sub>2</sub>**

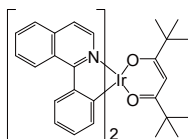
Bis(2-phenylquinoline)(2,2,6,6-tetramethylheptane-3,5-dionate)iridium(III)

CAS No.	: 713079-03-9
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>41</sub> H <sub>39</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 783.98 g/mole
UV	: 333 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 595 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 290 °C (0.5% weight loss)

Reference : *J. Photopolym. Sci. Technol.*, Vol.21, No.2, 2008**LT-N747** | **Ir(dpm)(piq)<sub>2</sub>**

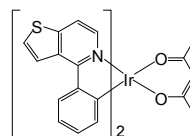
Bis(phenylisoquinoline)(2,2,6,6-tetramethylheptane-3,5-dionate) iridium(III)

CAS No.	: 1202867-58-0
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>41</sub> H <sub>39</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 783.98 g/mole
UV	: 354, 479 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 628 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 310 °C (0.5% weight loss)

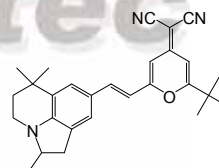
**LT-N748** | **Ir(dpm)(piq)<sub>2</sub>**

Bis(phenylisoquinoline)(2,2,6,6-tetramethylheptane-3,5-dionate) iridium(III)

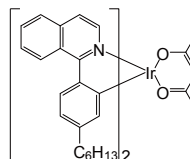
Grade	: Sublimed, > 99% (HPLC)
Formula	: C <sub>41</sub> H <sub>39</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 783.98 g/mole
UV	: 354, 479 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 628 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 310 °C (0.5% weight loss)

**LT-N749** | **DCQTB***(E)*-2-(2-*tert*-Butyl-6-(2-(2,6,6-trimethyl-2,4,5,6-tetrahydro-1H-pyrrolo[3,2,1-*ij*]quinolin-8-yl)vinyl)-4H-pyran-4-ylidene)malononitrile

CAS No.	: 953079-91-9
Grade	: > 98% (HPLC)
Formula	: C <sub>28</sub> H <sub>31</sub> N <sub>3</sub> O
M.W.	: 425.57 g/mole
UV	: 485 nm (in THF)
PL	: 629 nm (in THF)
TGA	: > 340 °C (0.5% weight loss)

Reference : *Adv. Funct. Mater.* 2007, 17, 93–100**LT-N751** | **Hex-Ir(piq)<sub>2</sub>(acac)**Bis[(4-*n*-hexylphenyl)isoquinoline](acetylacetonate) iridium (III)

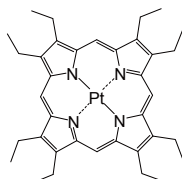
CAS No.	: 435294-13-6
Grade	: > 99% (HPLC)
Formula	: C <sub>47</sub> H <sub>51</sub> IrN <sub>2</sub> O <sub>2</sub>
M.W.	: 868.22 g/mole
UV	: 301, 346 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 612 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 200 °C (0.5% weight loss)



### LT-N752 | PtOEP

Platinum(II) octaethylporphine

CAS No.	: 31248-39-2
Grade	: > 95% (HPLC)
Formula	: $C_{36}H_{44}N_4Pt$
M.W.	: 727.84 g/mole
UV	: 389, 534 nm (in $CH_2Cl_2$ )
PL	: 649 nm (in $CH_2Cl_2$ )
TGA	: > 290 °C (0.5% weight loss)

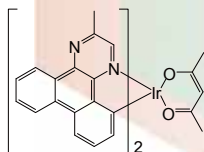


### LT-N753 | Ir(MDQ)<sub>2</sub>(acac)

Bis(2-methylidibenzo[*f,h*]quinoxaline)(acetylacetonate) iridium(III)

CAS No.	: 536755-34-7
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{39}H_{29}IrN_4O_2$
M.W.	: 777.88 g/mole
UV	: 325, 428 nm (in $CH_2Cl_2$ )
PL	: 616 nm (in $CH_2Cl_2$ )
TGA	: > 290 °C (0.5% weight loss)

Reference : *Adv. Mater.* 2003, 15, 3, p224-228

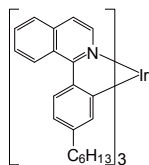


### LT-N754 | Hex-Ir(piq)<sub>3</sub>

Tris[2-(4-*n*-hexylphenyl)quinoline]iridium(III)

CAS No.	: 1240249-29-9
Grade	: > 99% (HPLC)
Formula	: $C_{63}H_{66}IrN_3$
M.W.	: 1057.43 g/mole
UV	: 325 nm (in $CH_2Cl_2$ )
PL	: 617 nm (in $CH_2Cl_2$ )
TGA	: > 250 °C (0.5% weight loss)

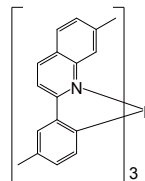
Reference : *Synthetic Metals* 161 (2011) 148-152



### LT-N757 | Ir(dmpq)<sub>3</sub>

Tris(2-(3-methylphenyl)-7-methyl-quinolato)iridium

Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{51}H_{42}IrN_3$
M.W.	: 889.12 g/mole
TGA	: > 280 °C (0.5% weight loss)

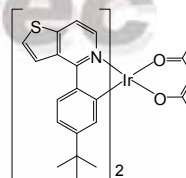


### LT-N758 | PO-01-TB

Iridium(III) bis(4-(4-*tert*-butylphenyl) thieno[3,2-*c*]pyridinato-*N,C2'*) acetylacetonate

CAS No.	: 1267497-10-8
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{39}H_{39}IrN_2O_2S_2$
M.W.	: 824.21 g/mole
UV	: 448 nm (in $CH_2Cl_2$ )
PL	: 562 nm (in $CH_2Cl_2$ )
TGA	: > 250 °C (0.5% weight loss)

Reference : 1. *TW I395804, US 8,722,207*;  
2. *Organic Electronics*, 2012, 13, 2149-2155 ;  
3. *Mater. Chem. C*, 2013, 1, 5008-5014

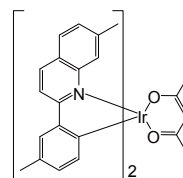


### LT-N762 | Ir(dmpq)<sub>2</sub>acac

Bis[2-(2-methylphenyl)-7-methyl-quinoline](acetylacetonate)iridium(III)

CAS No.	: 909542-64-9
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{39}H_{35}IrN_2O_2$
M.W.	: 755.92 g/mole
UV	: 273, 348 nm (in $CH_2Cl_2$ )
PL	: 600 nm (in $CH_2Cl_2$ )
TGA	: > 320 °C (0.5% weight loss)

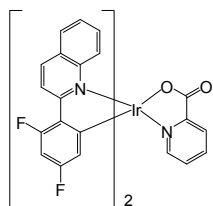
Reference : *Thin Solid Films* 496 (2006)626-630



**LT-N765** | FPQIpic

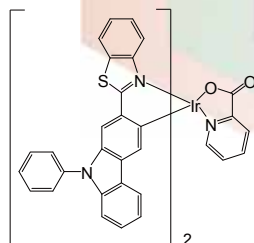
Iridium(III) bis(2-(2,4-difluorophenyl)quinoline) picolinate

CAS No.	: 1621179-34-7
Grade	: > 99% (HPLC)
Formula	: $C_{36}H_{14}F_4IrN_3O_2$
M.W.	: 795.11 g/mole
UV	: 342 nm (in THF)
PL	: 554 nm (in THF)
TGA	: > 270 °C (0.5% weight loss)

Reference : *Organic Electronics* (2013), 14(6), 1504-1509**LT-N766** | Ir(2-BtcPh)<sub>2</sub>(pic)

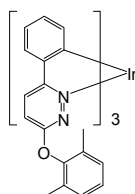
Bis[2-(9-phenylcarbazol-2-yl)-benzothiazole] iridium(III) picolinate

CAS No.	: 1452824-22-4
Grade	: > 99% (HPLC)
Formula	: $C_{56}H_{34}IrN_5O_2S_2$
M.W.	: 1065.18 g/mole
UV	: 324 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 624 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 280 °C (0.5% weight loss)

**LT-N767** | Ir(DMP)<sub>3</sub>

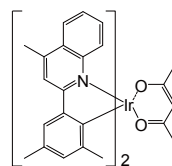
Tris[3-(2,6-dimethylphenoxy)-6-phenylpyridazine] iridium(III)

CAS No.	: 1542693-87-7
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{54}H_{45}IrN_6O_3$
M.W.	: 1018.19 g/mole
UV	: 250 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 552 nm (in CH <sub>2</sub> Cl <sub>2</sub> )

Reference : *RSC Advances* (2013), 3(1), 215-220**LT-N768** | Ir(mphmq)<sub>2</sub>acac

Bis[2-(3,5-dimethylphenyl)-4-methyl-quinoline] (acetylacetonate)iridium(III)

CAS No.	: 1228537-77-6
Grade	: Sublimed, > 99% (HPLC)
Formula	: $C_{41}H_{39}IrN_2O_2$
M.W.	: 783.98 g/mole
UV	: 432, 568 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 583 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 220 °C (0.5% weight loss)

Reference : *Organic Electronics Volume 13, Issue 10, October 2012, Pages 1956-1961***LT-N771** | PR-08

Grade	: > 99% (HPLC)
UV	: 254, 301, 523 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 593 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 230 °C (0.5% weight loss)

Reference : *Applied Mechanics and Materials*, 2015, 748 57-61**LT-N777** | PO-08

Grade	: > 99% (HPLC)
UV	: 258, 292, 413 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 558 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
TGA	: > 260 °C (0.5% weight loss)

Reference : *Applied Mechanics and Materials*, 2015, 748 57-61

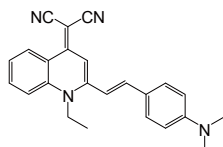


### LT-N778 | ED

(E)-2-(2-(4-(Dimethylamino)styryl)-1-ethylquinolin-4(1H)-ylidene)malononitrile

CAS No. : 1415845-07-6  
 Grade : > 99% (HPLC)  
 Formula :  $C_{24}H_{22}N_4$   
 M.W. : 366.4680 g/mole  
 UV : 430 nm (in THF)  
 PL : 594 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)

Reference : *ACS Appl. Mater. Interfaces* 2013, 5, 192

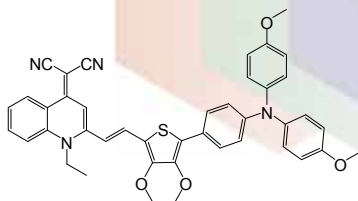


### LT-N779 | QM-5

(E)-2-(2-(2-(7-(4-(Bis(4-methoxyphenyl)amino)phenyl)-2,3-dihydrothieno[3,4-b][1,4]dioxin-5-yl)vinyl)-1-ethylquinolin-4(1H)-ylidene)malononitrile

CAS No. : 1651166-05-0  
 Grade : > 99% (HPLC)  
 Formula :  $C_{42}H_{34}N_4O_4S$   
 M.W. : 690.8180 g/mole  
 TGA : > 250 °C (0.5% weight loss)

Reference : *Angew. Chem. Int. Ed.* 2015, DOI:10.1002/anie.201501478

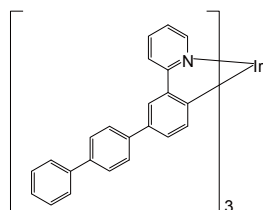


### LT-N780 | Ir(ppy)<sub>3</sub>-Bp

Tris[1,1':4',1''-terphenyl-2-(2-pyridinyl-κM)phenyl-κC]iridium

CAS No. : 1404192-47-7  
 Grade : > 99% (HPLC)  
 Formula :  $C_{69}H_{48}IrN_3$   
 M.W. : 1111.36 g/mole  
 UV : 294 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 520 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 250 °C (0.5% weight loss)

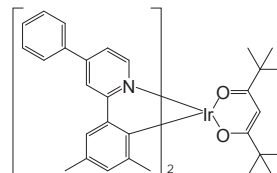
Reference : *Advanced Functional Materials* (2012), 22(16), 3406-3413



### LT-N792 | Ir(dmppy-ph)2tmd

Bis(2-(3,5-dimethylphenyl)-4-phenylpyridine)(2,2,6,6-tetramethylethylheptane-3,5-diketonate)iridium(III)

CAS No. : 2050041-61-5  
 Grade : Sublimed, >99 % (HPLC)  
 Formula :  $C_{49}H_{51}IrN_2O_2$   
 M.W. : 892.18 g/mole  
 UV : 276,398,481 nm (in CHCl<sub>3</sub>)



Lumtec

# Organic Light Emitting Diode (OLED)

## Electron Transport Layer / Hole Blocking Layer(ETL/HBL) Materials

### LT-E301 | Liq

8-Hydroxyquinolinolato-lithium

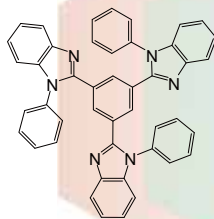
CAS No. : 850918-68-2  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_9H_6NOLi$   
M.W. : 151.09 g/mole  
UV : 261 nm (in THF)  
PL : 514 nm (in THF)  
TGA : > 310 °C (0.5% weight loss)



### LT-E302 | TPBi

2,2',2''-(1,3,5-Benzinetriyl)-tris(1-phenyl-1-*H*-benzimidazole)

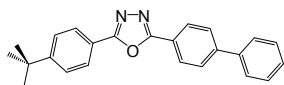
CAS No. : 192198-85-9  
Grade : Sublimed, > 99.5% (HPLC)  
Formula :  $C_{45}H_{30}N_6$   
M.W. : 654.76 g/mole  
UV : 305 nm (in THF)  
PL : 370 nm (in THF)  
TGA : > 350 °C (0.5% weight loss)



### LT-E303 | PBD

2-(4-Biphenyl)-5-(4-*tert*-butylphenyl)-1,3,4-oxadiazole

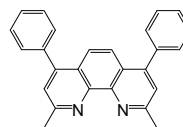
CAS No. : 15082-28-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{24}H_{22}N_2O$   
M.W. : 354.44 g/mole  
UV : 305 nm (in THF)  
PL : 380 nm (in THF)  
TGA : > 210 °C (0.5% weight loss)



### LT-E304 | BCP

2,9-Dimethyl-4,7-diphenyl-1,10-phenanthroline

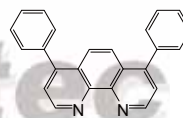
CAS No. : 4733-39-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{26}H_{20}N_2$   
M.W. : 360.45 g/mole  
UV : 277 nm (in THF)  
PL : 386 nm (in THF)  
TGA : > 240 °C (0.5% weight loss)



### LT-E305 | Bphen

4,7-Diphenyl-1,10-phenanthroline

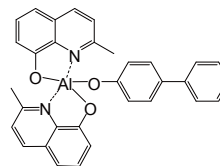
CAS No. : 1662-01-7  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{24}H_{16}N_2$   
M.W. : 332.4 g/mole  
UV : 272 nm (in THF)  
PL : 379 nm (in THF)  
TGA : > 240 °C (0.5% weight loss)



### LT-E407 | BALq

Bis(2-methyl-8-quinolinolato)-4-(phenylphenolato)aluminium

CAS No. : 146162-54-1  
Grade : Sublimed, > 99%  
Formula :  $C_{32}H_{25}N_2O_3Al$   
M.W. : 512.53 g/mole  
UV : 259 nm (in THF)  
PL : 477 nm (in THF)  
TGA : > 230 °C (0.5% weight loss)

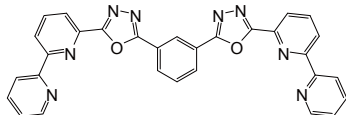


### LT-N821 | Bpy-OXD

1,3-Bis[2-(2,2'-bipyridine-6-yl)-1,3,4-oxadiazol-5-yl]benzene

CAS No. : 866117-19-3  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{30}H_{18}N_8O_2$   
 M.W. : 522.52 g/mole  
 UV : 276, 308 nm (in THF)  
 PL : 348 nm (in THF)  
 TGA : > 300 °C (0.5% weight loss)

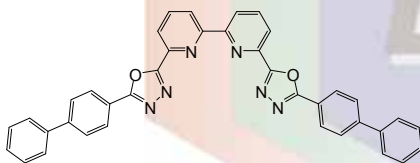
Reference : *J. Mater. Chem.*, 2006, 16, 221-225



### LT-N828 | BP-OXD-Bpy

6,6'-Bis[5-(biphenyl-4-yl)-1,3,4-oxadiazol-2-yl]-2,2'-bipyridyl

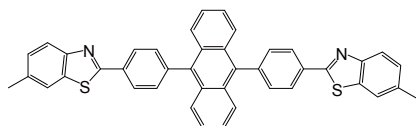
CAS No. : 1219827-28-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{38}H_{24}N_6O_2$   
 M.W. : 596.64 g/mole  
 UV : 319 nm (in THF)  
 PL : 372 nm (in THF)  
 TGA : > 350 °C (0.5% weight loss)



### LT-N832 | DBzA

6-Methyl-2-(4-(9-(4-(6-methylbenzo[d]thiazol-2-yl)phenyl)anthracen-10-yl)phenyl)benzo[d]thiazole

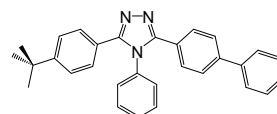
CAS No. : 850018-19-8  
 Grade : Sublimed, > 99%  
 Formula :  $C_{42}H_{28}N_2S_2$   
 M.W. : 624.82 g/mole  
 UV : 311, 376, 396 nm (in THF)  
 PL : 448 nm (in THF)  
 TGA : > 400 °C (0.5% weight loss)



### LT-N836 | TAZ

3-(4-Biphenyl)-4-phenyl-5-tert-butylphenyl-1,2,4-triazole

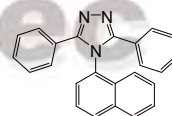
CAS No. : 150405-69-9  
 Grade : Sublimed, > 98% (HPLC)  
 Formula :  $C_{30}H_{27}N_3$   
 M.W. : 429.56 g/mole  
 UV : 290 nm (in THF)  
 PL : 370 nm (in THF)  
 TGA : > 250 °C (0.5% weight loss)  
 Reference : 1. *Appl. Phys. Lett.* Vol. 85, No. 21, 22 November 2  
 2. *Appl. Phys. Lett.* 87, 193501 (2005)



### LT-N837 | NTAZ

4-(Naphthalen-1-yl)-3,5-diphenyl-4H-1,2,4-triazole

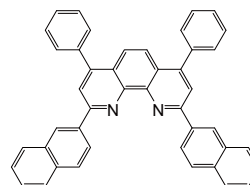
CAS No. : 16152-10-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{24}H_{17}N_3$   
 M.W. : 347.41 g/mole  
 UV : 264 nm (in  $CH_2Cl_2$ )  
 PL : 367 nm (in  $CH_2Cl_2$ )  
 TGA : > 260 °C (0.5% weight loss)



### LT-N843 | NBphen

2,9-Bis(naphthalen-2-yl)-4,7-diphenyl-1,10-phenanthroline

CAS No. : 1174006-43-9  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{44}H_{28}N_2$   
 M.W. : 584.71 g/mole  
 UV : 264, 349 nm (in THF)  
 PL : 412 nm (in THF)  
 TGA : > 340 °C (0.5% weight loss)



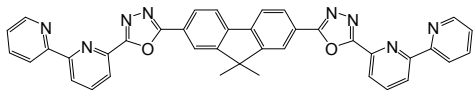
# Organic Light Emitting Diode (OLED)

## Electron Transport Layer / Hole Blocking Layer(ETL/HBL) Materials

### LT-N851 | Bpy-FOXD

2,7-Bis[2-(2,2'-bipyridine-6-yl)-1,3,4-oxadiazole-5-yl]-9,9-dimethylfluorene

CAS No. : 1174006-45-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{39}H_{26}N_8O_2$   
M.W. : 638.68 g/mole  
UV : 348, 365 nm (in  $CH_2Cl_2$ )  
PL : 399 nm (in  $CH_2Cl_2$ )  
TGA : > 350 °C (0.5% weight loss)

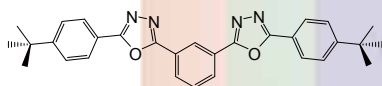


### LT-N855 | OXD-7

1,3-Bis[2-(4-*tert*-butylphenyl)-1,3,4-oxadiazole-5-yl]benzene

CAS No. : 138372-67-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{30}H_{30}N_4O_2$   
M.W. : 478.58 g/mole  
UV : 292 nm (in THF)  
PL : 347 nm (in THF)  
TGA : > 290 °C (0.5% weight loss)

Reference : 1. *JP Journal of Appl. Phys.* Vol.44, No.6A, 2005,  
2. *Organic Electronics*, Vol. 4, Issues 2-3, Sep. 2

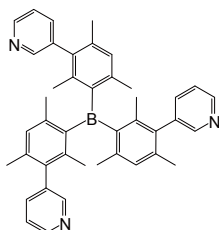


### LT-N856 | 3TPYMB

Tris(2,4,6-trimethyl-3-(pyridin-3-yl)phenyl)borane

CAS No. : 929203-02-1  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{42}H_{42}BN_3$   
M.W. : 599.61 g/mole  
UV : 331 nm (in THF)  
PL : 382 nm (in THF)  
TGA : > 230 °C (0.5% weight loss)

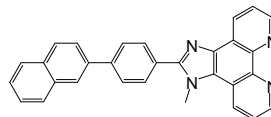
Reference : *Chemistry Letters*. Vol. 36, No. 2, P262, 2007.



### LT-N857 | 2-NPIP

1-Methyl-2-(4-(naphthalen-2-yl)phenyl)-1*H*-imidazo[4,5*f*] [1,10]phenanthroline

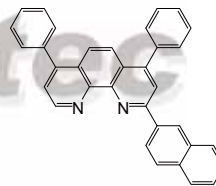
CAS No. : 1234997-42-2  
Grade : Sublimed, > 99%  
Formula :  $C_{30}H_{20}N_4$   
M.W. : 436.51 g/mole  
UV : 275 nm (in  $CH_2Cl_2$ )  
PL : 412 nm (in  $CH_2Cl_2$ )  
TGA : > 360 °C (0.5% weight loss)



### LT-N860 | HNBphen

2-(Naphthalen-2-yl)-4,7-diphenyl-1,10-phenanthroline

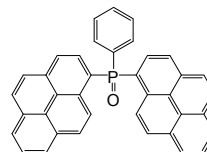
CAS No. : 923972-84-3  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{34}H_{22}N_2$   
M.W. : 458.55 g/mole  
UV : 281,327 nm (in  $CH_2Cl_2$ )  
PL : 398 nm (in  $CH_2Cl_2$ )  
TGA : > 320 °C (0.5% weight loss)



### LT-N861 | POPy<sub>2</sub>

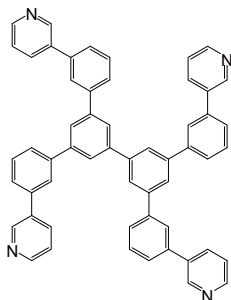
Phenyl-dipyrenylphosphine oxide

CAS No. : 721969-93-3  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{38}H_{23}OP$   
M.W. : 526.56 g/mole  
UV : 281, 360 nm (in  $CH_2Cl_2$ )  
PL : 382 nm (in  $CH_2Cl_2$ )  
TGA : > 370 °C (0.5% weight loss)  
Reference : *Appl. Phys. Lett.* 92, 063306 2008



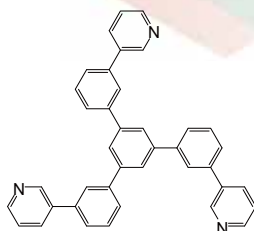
**LT-N862** | BP4mPy3,3',5,5'-Tetra(*m*-pyridyl)-phen-3-yl)biphenyl

CAS No. : 1009033-94-6  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{56}H_{38}N_4$   
 M.W. : 766.93 g/mole  
 UV : 253 nm (in THF)  
 PL : 352 nm (in THF)  
 TGA : > 370 °C (0.5% weight loss)

Reference : *Org. Lett.*, 2008, 10(5), p941-944.**LT-N863** | TmPyPB

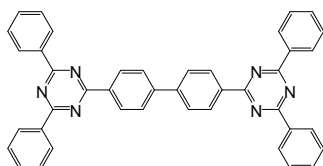
1,3,5-Tri(3-pyridyl)-phen-3-yl)benzene

CAS No. : 921205-03-0  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{39}H_{27}N_3$   
 M.W. : 537.65 g/mole  
 UV : 254 nm (in  $CH_2Cl_2$ )  
 PL : 353 nm (in  $CH_2Cl_2$ )  
 TGA : > 310 °C (0.5% weight loss)

Reference : *Adv.Mater.*, 2008, 20, p2125-2130.**LT-N864** | BTB

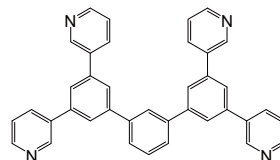
4,4'-Bis(4,6-diphenyl-1,3,5-triazin-2-yl)biphenyl

CAS No. : 266349-83-1  
 Grade : Sublimed product  
 Formula :  $C_{42}H_{28}N_6$   
 M.W. : 616.71 g/mole  
 TGA : > 360 °C (0.5% weight loss)

Reference : *Organic Electronics*, 2008, 9(3), p285**LT-N865** | BmPyPhB

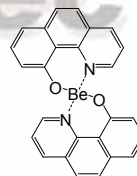
1,3-Bis[3,5-di(pyridin-3-yl)phenyl]benzene

CAS No. : 1030380-38-1  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{38}H_{26}N_4$   
 M.W. : 538.64 g/mole  
 UV : 250 nm (in  $CH_2Cl_2$ )  
 PL : 357 nm (in  $CH_2Cl_2$ )  
 TGA : > 350 °C (0.5% weight loss)

Reference : *Chem. Mater.* 2008, 20, 5951-5953**LT-N868** | Bepq<sub>2</sub>

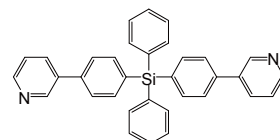
2-(4-(9,10-Di(naphthalen-2-yl)anthracen-2-yl)phenyl)-1-phenyl-1H-phenanthro[9,10-d]imidazole

CAS No. : 148896-39-3  
 Grade : Sublimed product  
 Formula :  $C_{26}H_{16}BeN_2O_2$   
 M.W. : 397.43 g/mole  
 UV : 406 nm (in  $CH_2Cl_2$ )  
 PL : 492 nm (in  $CH_2Cl_2$ )  
 TGA : > 320 °C (0.5% weight loss)

**LT-N869** | DPPS

Diphenylbis(4-(pyridin-3-yl)phenyl)silane

CAS No. : 1152162-74-7  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_{34}H_{26}N_2Si$   
 M.W. : 490.67 g/mole  
 UV : 251 nm (in  $CH_2Cl_2$ )  
 PL : 366 nm (in  $CH_2Cl_2$ )  
 TGA : > 230 °C (0.5% weight loss)

Reference : *Adv. Mater.* 2009, 21, 1271-1274

# Organic Light Emitting Diode (OLED)

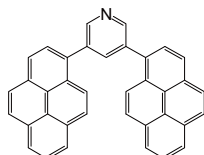
## Electron Transport Layer / Hole Blocking Layer(ETL/HBL) Materials

### LT-N870 | PY1

3,5-Di(pyren-1-yl)pyridine

CAS No. : 1246467-58-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{37}H_{21}N$   
M.W. : 479.57 g/mole  
UV : 246, 282, 351 nm (in  $CH_2Cl_2$ )  
PL : 389 nm (in  $CH_2Cl_2$ )  
TGA : > 390 °C (0.5% weight loss)

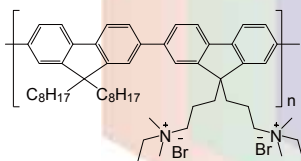
Reference : *Organic electronics*, 10, (2009), 877-882



### LT-N878 | PFNBr

Poly[(9,9-bis(3'-(*N,N*-dimethyl)-*N*-ethylammonium-propyl)-2,7-fluorene)-*alt*-2,7-(9,9-dioctylfluorene)]

Grade :  $M_w > 10,000$  (GPC)  
Formula :  $(C_{56}H_{80}N_2Br_2)_n$   
UV : 375 nm (in MeOH)  
PL : 440 nm (in MeOH)  
Solubility : Soluble in MeOH  
Reference : *Chem. Mater.*, 2004, 16, 708

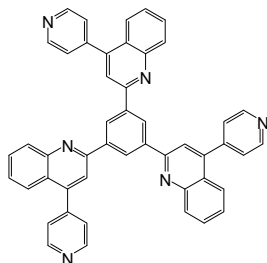


### LT-N879 | TPyQB

1,3,5-Tris(4-(pyridin-4-yl)quinolin-2-yl)benzene

CAS No. : 1350742-68-5  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{48}H_{30}N_6$   
M.W. : 690.79 g/mole  
PL : 381 nm (in  $CH_2Cl_2$ )  
TGA : > 400 °C (0.5% weight loss)

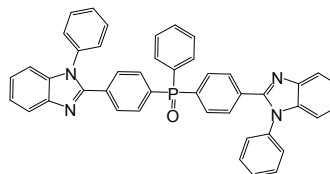
Reference : *Advanced Functional Materials* (2011), 21(20), 3889-3899.



### LT-N885 | BIPO

2,2'-(4,4'-(Phenylphosphoryl)bis(4,1-phenylene))bis(1-phenyl-1*H*-benzo[*d*]imidazole)

CAS No. : 1426143-77-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{44}H_{31}N_4OP$   
M.W. : 662.72 g/mole  
UV : 309 nm (in  $CH_2Cl_2$ )  
PL : 379 nm (in  $CH_2Cl_2$ )  
TGA : > 250 °C (0.5% weight loss)

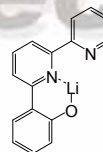


### LT-N887 | Libpp

Lithium 2-(2', 2''-bipyridine-6'-yl)phenolate

CAS No. : 1049805-81-3  
Grade : Sublimed, > 99% (NMR)  
Formula :  $C_{16}H_{11}LiN_2O$   
M.W. : 254.21 g/mole  
UV : 235, 265 nm (in  $CH_2Cl_2$ )  
PL : 345 nm (in  $CH_2Cl_2$ )  
TGA : > 220 °C (0.5% weight loss)

Reference : *Organic Electronics* (2009), 10(2), 228-232

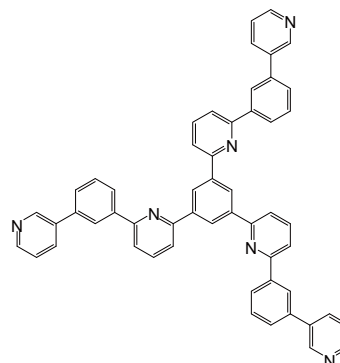


### LT-N889 | Tm3PyP26PyB

1,3,5-Tris(6-(3-(pyridin-3-yl)phenyl)pyridin-2-yl)benzene

CAS No. : 1492917-78-8  
Grade : Sublimed, > 99% (NMR)  
Formula :  $C_{54}H_{36}N_6$   
M.W. : 768.9 g/mole  
UV : 255 nm (in  $CH_2Cl_2$ )  
PL : 357 nm (film)  
TGA : > 280 °C (0.5% weight loss)

Reference : *Advanced Functional Materials* (2014), 24(21), 3268-3275

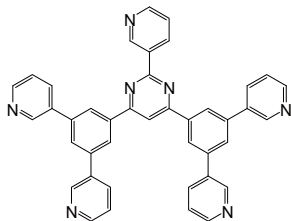


### LT-N890 | B3PYPPM

4,6-Bis(3,5-di(pyridin-3-yl)phenyl)-2-(pyridin-3-yl)pyrimidine

CAS No. : 1382639-67-9  
 Grade : Sublimed, > 99% (NMR)  
 Formula :  $C_{41}H_{27}N_7$   
 M.W. : 617.7 g/mole  
 UV : 255 nm (in  $CH_2Cl_2$ )  
 TGA : > 280 °C (0.5% weight loss)

Reference : *Chemistry of Materials* (2012), 24(20), 3817-3827

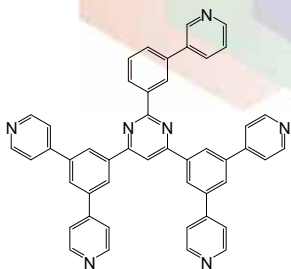


### LT-N891 | B4PYPPyPM

4,6-Bis(3,5-di(pyridin-4-yl)phenyl)-2-(3-(pyridin-3-yl)phenyl)pyrimidine

CAS No. : 1382639-70-4  
 Grade : Sublimed, > 99% (NMR)  
 Formula :  $C_{47}H_{31}N_7$   
 M.W. : 693.8 g/mole  
 UV : 255 nm (in  $CH_2Cl_2$ )  
 TGA : > 280 °C (0.5% weight loss)

Reference : *Chemistry of Materials* (2012), 24(20), 3817-3827

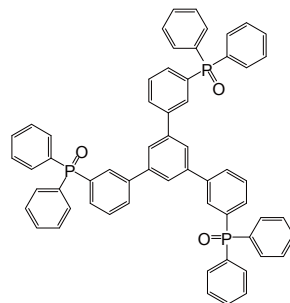


### LT-N892 | TP3PO

1,3,5-Tri(diphenylphosphoryl)-phen-3-yl benzene

CAS No. : 1311378-95-6  
 Grade : Sublimed, > 98% (HPLC)  
 Formula :  $C_{60}H_{45}O_3P_3$   
 M.W. : 906.92 g/mole  
 UV : 259 nm (in  $CH_2Cl_2$ )  
 PL : 349 nm (in  $CH_2Cl_2$ )  
 TGA : > 250 °C (0.5% weight loss)

Reference : *Chemistry of Materials* (2014), 26(3), 1463-1470

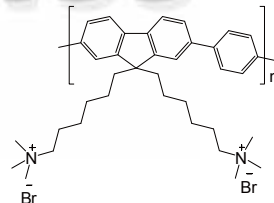


### LT-N894 | FPQ-Br

Poly[9,9-bis[6'-(*N,N,N*-trimethylammonium)hexyl]fluorene-*alt-co*-1,4-phenylene]bromide

Grade :  $M_w > 20,000$  (GPC)  
 Formula :  $(C_{37}H_{52}Br_2N_2)_n$

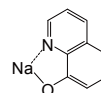
Reference : *Adv Mate.* 2011, 23, 2759-2763



### LT-N895 | NaQ

8-Hydroxyquinoline sodium salt

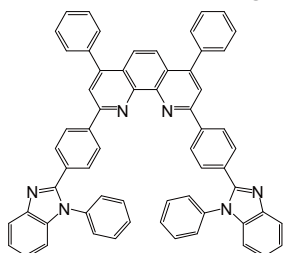
CAS No. : 2872-54-0  
 Grade : Sublimed, > 99% (HPLC)  
 Formula :  $C_9H_6NONa$   
 M.W. : 167.14 g/mole  
 UV : 261 nm (in THF)  
 PL : 331 nm (in THF)  
 TGA : > 310 °C (0.5% weight loss)



### LT-N8001 | DBimiBphen

4,7-Diphenyl-2,9-bis(4-(1-phenyl-1*H*-benzo[*d*]imidazol-2-yl)phenyl)-1,10-phenanthroline

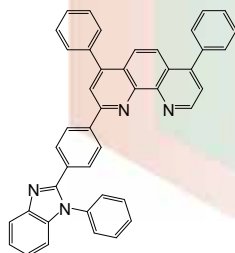
CAS No. : 1447848-17-0  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{62}H_{40}N_6$   
M.W. : 869.02 g/mole  
UV : 319, 357 nm (in  $CH_2Cl_2$ )  
TGA : > 400 °C (0.5% weight loss)



### LT-N8002 | BimiBphen

4,7-Diphenyl-2-(4-(1-phenyl-1*H*-benzo[*d*]imidazol-2-yl)phenyl)-1,10-phenanthroline

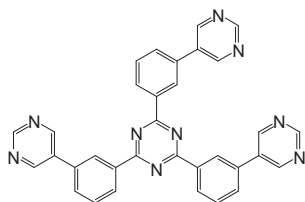
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{43}H_{28}N_4$   
M.W. : 600.71 g/mole  
TGA : > 350 °C (0.5% weight loss)



### LT-N8004 | TPM-TAZ

2,4,6-Tris(3-(pyrimidin-5-yl)phenyl)-1,3,5-triazine

CAS No. : 1874199-82-2  
Grade : Sublimed, > 99% (HPLC)  
Formula :  $C_{33}H_{21}N_9$   
M.W. : 543.58 g/mole





# Organic Light Emitting Diode (OLED)

## Electron Injection Layer(EIL) Materials / Metal

### LT-E001 | LiF

Lithium fluoride

CAS No. : 7789-24-4  
Grade : > 99.99%  
Formula : LiF  
M.W. : 25.94 g/mole  
Melting Point : 848 °C  
Boiling Point : 1681 °C

### LT-E002 | Cs<sub>2</sub>CO<sub>3</sub>

Cesium carbonate

CAS No. : 534-17-8  
Grade : > 99.994%  
Formula : Cs<sub>2</sub>CO<sub>3</sub>  
M.W. : 325.82 g/mole  
Melting Point : 610 °C

### LT-E003 | MoO<sub>3</sub>

Molybdenum(VI) Oxide

CAS No. : 1313-27-5  
Grade : > 99.998%  
Formula : MoO<sub>3</sub>  
M.W. : 143.94 g/mole  
Melting Point : 795 °C

### LT-E004 | CsF

Cesium fluoride

CAS No. : 13400-13-0  
Grade : > 99%  
Formula : CsF  
M.W. : 151.90 g/mole  
Melting Point : 682 °C

### LT-E005 | Al

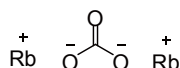
Aluminium

CAS No. : 7429-90-5  
Grade : > 99.999%  
Formula : Al  
M.W. : 26.98 g/mole  
Melting Point : 660 °C

### LT-E007 | Rb<sub>2</sub>CO<sub>3</sub>

Rubidium carbonate

CAS No. : 584-09-8  
Grade : > 99.9%  
Formula : Rb<sub>2</sub>CO<sub>3</sub>  
M.W. : 588.74 g/mole



### LT-E008 | ReO<sub>3</sub>

Rhenium(VI) oxide

CAS No. : 1314-28-9  
Grade : > 99.9%  
Formula : ReO<sub>3</sub>  
M.W. : 234.21 g/mole



Lumtec