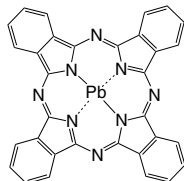


## Small Molecular / Oligomer

## LT-D2004 | PbPC

Lead(II) phthalocyanine

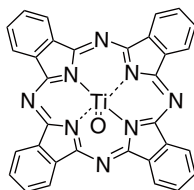
CAS No.	: 15187-16-3
Grade	: Sublimed >99%
Formula	: C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Pb
M.W.	: 719.74 g/mole
UV	: 698 nm (in DMF)



## LT-E206 | TiOPC

Titanium oxide phthalocyanine

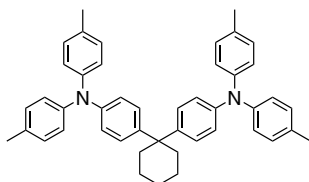
CAS No.	: 26201-32-1
Grade	: Sublimed >99%
Formula	: C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> O <sub>2</sub> Ti
M.W.	: 576.39 g/mole
UV	: 349,692 nm (in CH <sub>2</sub> Cl <sub>2</sub> )
PL	: 392 nm (film)
TGA	: >440°C (0.5% weight loss)



## LT-N137 | TAPC

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

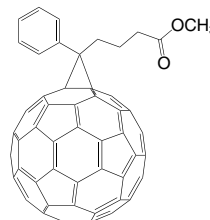
CAS No.	: 58473-78-2
Grade	: Sublimed >99.5% (HPLC)
Formula	: C <sub>46</sub> H <sub>46</sub> N <sub>2</sub>
M.W.	: 626.87 g/mole
UV	: 305 nm (in THF)
PL	: 414 nm (in THF)
TGA	: >290 °C (0.5% weight loss)
Solvent	: Toluene, Chloroform



## LT-S905 | PCBM

(6,6)-Phenyl C61 butyric acid methyl ester

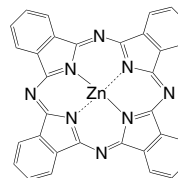
CAS No.	: 160848-22-6
Grade	: >99.5% (HPLC)
Formula	: C <sub>72</sub> H <sub>14</sub> O <sub>2</sub>
M.W.	: 910.88 g/mole
UV	: 258, 328 nm (in THF)



## LT-S906 | ZnPC

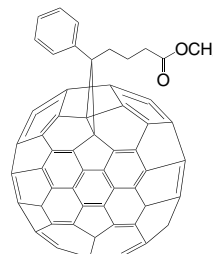
Zinc phthalocyanine

CAS No.	: 14320-04-8
Grade	: Sublimed >99%
Formula	: C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Zn
M.W.	: 577.92 g/mole
PL	: 534 nm (in CH <sub>2</sub> Cl <sub>2</sub> )

LT-S923 | PC<sub>71</sub>BM

(6,6)-Phenyl C71 butyric acid methyl ester, mixture of isomers

CAS No.	: 609771-63-3
Grade	: >99% (HPLC)
Formula	: C <sub>82</sub> H <sub>14</sub> O <sub>2</sub>
M.W.	: 1030.93 g/mole
UV	: 372 nm (in Toluene)
TGA	: >360°C (0.5% weight loss)

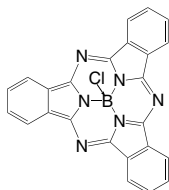


## Small Molecular / Oligomer

## LT-S943 | SubPC

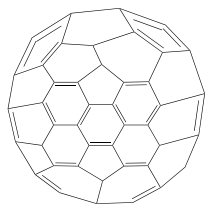
Boron subphthalocyanine chloride

CAS No. : 36530-06-0  
 Grade : Sublimed >99%  
 Formula :  $C_{24}H_{12}BN_6Cl$   
 M.W. : 430.66 g/mole  
 UV : 565 nm (in DMF)  
 PL : 577 nm (in DMF)

LT-S967 | C<sub>70</sub>

(5,6)-Fullerene-C70

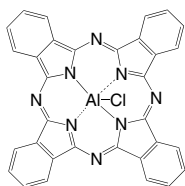
CAS No. : 115383-22-7  
 Grade : >99% (HPLC)  
 Formula :  $C_{70}$   
 M.W. : 840.75 g/mole  
 UV : 344, 382 nm (in  $CH_2Cl_2$ )  
 TGA : >450°C (0.5% weight loss)



## LT-S9025 | AIPCCI

Aluminum phthalocyanine chloride

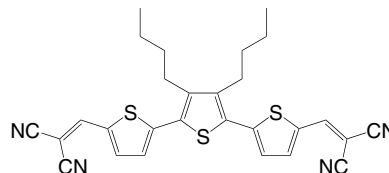
CAS No. : 14154-42-8  
 Grade : Sublimed >99%  
 Formula :  $C_{32}H_{16}AlClN_8$   
 M.W. : 574.97 g/mole  
 UV : 675 nm (in DMF)



## LT-S9125 | DCV3T

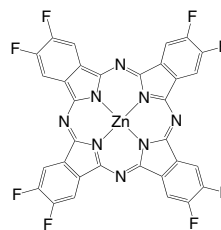
3',4'-Dibutyl-5,5''-bis(dicyanovinyl)-2,2':5',2''-terthiophene

CAS No. : 908588-68-1  
 Grade : >99% (HPLC)  
 Formula :  $C_{28}H_{24}N_4S_3$   
 M.W. : 512.71 g/mole  
 UV : 498 nm (in  $CH_2Cl_2$ )

LT-S9172 | F<sub>8</sub>ZnPc

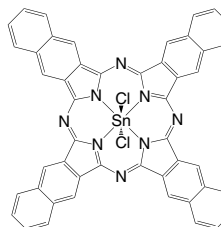
Zinc(II)-2,3,9,10,16,17,23,24-octafluoro-29H,31H-phthalocyanine

CAS No. : 676519-80-5  
 Grade : Sublimed >99%  
 Formula :  $C_{32}H_8F_8N_8Zn$   
 M.W. : 721.86 g/mole  
 UV : 338, 656 nm (in DMF)  
 TGA : >300°C (0.5% weight loss)

LT-S9180 | SnNCCI<sub>2</sub>

Tin(IV) 2,3-naphthalocyanine dichloride

CAS No. : 26857-61-4  
 Grade : Sublimed product  
 Formula :  $C_{48}H_{24}Cl_2N_8Sn$   
 M.W. : 902.37 g/mole  
 TGA : >300°C (0.5% weight loss)

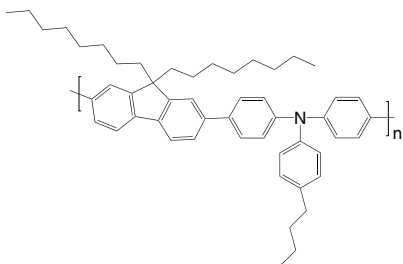


## Polymers

## LT-N174

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

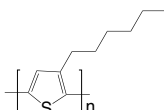
CAS No. : 223569-31-1  
 Grade :  $M_w > 30,000$  (GPC)  
 Formula :  $(C_{51}H_{61}N)_n$   
 UV : 385 nm (in THF)  
 PL : 434 nm (in THF)  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



## LT-S909 P3HT

Poly(3-hexylthiophene-2,5-diyl)

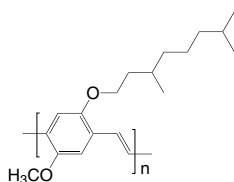
CAS No. : 104934-50-1  
 Grade :  $M_w > 45,000$  (GPC); Electronic Grade: Regio Regular >93%  
 Formula :  $(C_{10}H_{14}S)_n$   
 UV : 445 nm (in THF)  
 PL : 564 nm (in THF)  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



## LT-S932 MDMO-PPV

Poly[2-methoxy-5-(3,7-dimethyloxy)yl]-1,4-phenylenevinylene]

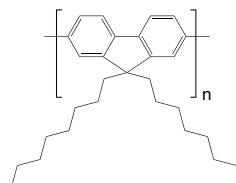
CAS No. : 177716-59-5  
 Grade :  $M_w > 100,000$  (GPC)  
 Formula :  $(C_{19}H_{28}O_2)_n$   
 UV : 485 nm (in  $CH_2Cl_2$ )  
 PL : 555 nm (in  $CH_2Cl_2$ )  
 Solubility : Soluble in THF,  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



## LT-S933 PFO

Poly(9,9-dioctylfluorenyl-2,7-diyl)

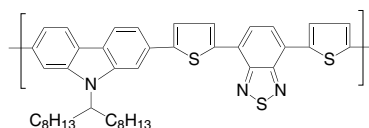
CAS No. : 123864-00-6  
 Grade :  $M_w = 50,000 \sim 150,000$  (GPC)  
 Formula :  $(C_{29}H_{40})_n$   
 UV : 376 nm (in THF)  
 PL : 426 nm (in THF)  
 Solubility : Soluble in THF,  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



## LT-S948 PCDTBT

Poly[*N*-9'-heptadecanyl-2,7-carbazole-*alt*-5,5-(4',7'-di-2-thienyl-2',1',3'-benzothiadiazole)]

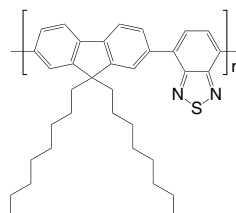
CAS No. : 958261-50-2  
 Grade :  $M_w = 20,000 \sim 100,000$  (GPC)  
 Formula :  $(C_{43}H_{47}N_3S_3)_n$   
 UV : 390, 554 nm (in THF)  
 PL : 639 nm (in THF)  
 Solubility : >5 mg/mL in  $CHCl_3$



## LT-S957 F8BT

Poly[(9,9-dioctylfluorenyl-2,7-diyl)-*alt*-(benzo[2,1,3]thiadiazol-4,7-diyl)]

CAS No. : 210347-52-7  
 Grade :  $M_w > 20,000$  (GPC)  
 Formula :  $(C_{35}H_{42}N_2S)_n$   
 UV : 453 nm (in THF)  
 PL : 534 nm (in THF)  
 Solubility : Soluble in THF,  $CHCl_3$ , Chlorobenzene, Dichlorobenzene

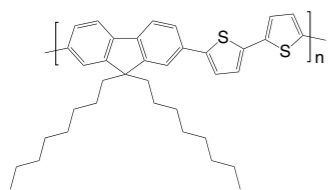


## Polymers

## LT-S979 | F8T2

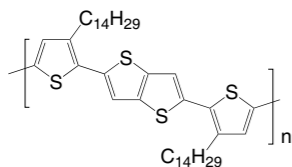
Poly[(9,9-di-*n*-octylfluorenyl-2,7-diyl)-*alt*-2,2'-bithiophene-5,5'-diyl]

CAS No. : 210347-56-1  
 Grade :  $M_w > 20,000$  (GPC)  
 Formula :  $(C_{37}H_{44}S_2)_n$   
 UV : 454 nm (in THF)  
 PL : 500 nm (in THF)  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene

LT-S982 | PBTTC- $C_{14}$ 

Poly[2,5-bis(3-tetradecylthiophen-2-yl)thieno[3,2-*b*]thiophene]

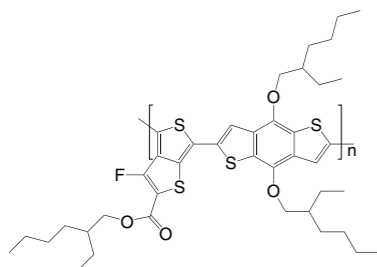
CAS No. : 888491-19-8  
 Grade :  $M_w = 10,000 \sim 100,000$  (GPC)  
 Formula :  $(C_{42}H_{62}S_4)_n$   
 UV : 466 nm (in THF)  
 PL : 557 nm (in THF)  
 Solubility :  $> 5$  mg/mL in  $CHCl_3$



## LT-S9050 | PTB7

Poly[4,8-bis[(2-ethylhexyl)oxy]benzo[1,2-*b*:4,5-*b'*]dithiophene-2,6-diyl-*alt*-3-fluoro-2-[(2-ethylhexyl)carbonyl]thieno[3,4-*b*]thiophene-4,6-diyl]

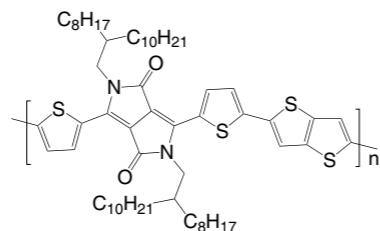
CAS No. : 1266549-31-8  
 Grade :  $M_w > 20,000$  (GPC)  
 Formula :  $(C_{41}H_{53}FO_4S_4)_n$   
 UV : 670 nm (in  $CH_2Cl_2$ )  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



## LT-S9118 | PDBT-co-TT

Poly[2,2'-[(2,5-bis(2-octyldodecyl)-3,6-dioxo-2,3,5,6-tetrahydropyrrolo[3,4-*c*]pyrrole-1,4-diyl)]dithiophene-5,5'-diyl-*alt*-thieno[3,2-*b*]thiophen-2,5-diyl]

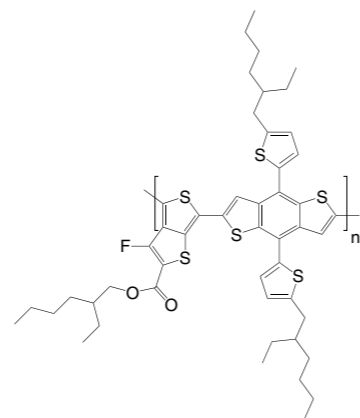
CAS No. : 1260685-65-1  
 Grade :  $M_w > 30,000$  (GPC)  
 Formula :  $(C_{60}H_{88}N_2O_2S_4)_n$   
 UV : 810 nm (in  $CHCl_3$ )  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene



## LT-S9139 | PTB7-Th

Poly[4,8-bis[5-(2-ethylhexyl)thiophen-2-yl]benzo[1,2-*b*:4,5-*b'*]dithiophene-2,6-diyl-*alt*-3-fluoro-2-[(2-ethylhexyl)carbonyl]thieno[3,4-*b*]thiophene-4,6-diyl]

CAS No. : 1469791-66-9  
 Grade :  $M_w = 10,000 \sim 100,000$  (GPC)  
 Formula :  $(C_{49}H_{57}FO_2S_6)_n$   
 UV : 695 nm (in  $CHCl_3$ )  
 Solubility :  $> 5$  mg/mL in  $CHCl_3$



## Polymers

## LT-PS001 | PEDOT: PSS

Poly(3,4-ethylenedioxythiophene)-poly(styrenesulfonate)

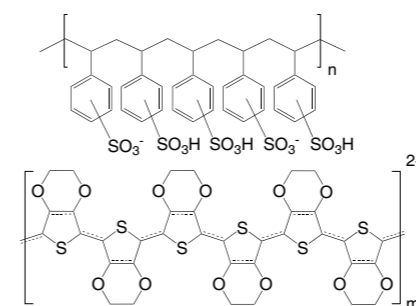
**Specification**  
 Description : Aqueous dispersion, blue liquid.  
 Sodium : Max. 400 ppm  
 Sulfate : Max. 40 ppm  
 Solid content: 1.3 - 1.7 wt%  
 PSD d50 : 80 nm  
 PSD d90 : 100 nm  
 Resistivity : 500-5000  $\Omega$ cm  
 Viscosity : 5-12 mPas

**Technical Data (guide values, not a specification)**

Form : liquid  
 Odour : odourless  
 Colour : dark blue  
 PEDOT:PSS ratio: 1:6 (by weight)  
 PEDOT work function: approx 5.2 eV  
 pH : 1.2 - 2.2 at 20°C  
 Boiling Point : approx 100°C

**Storage:**

The product is sensitive to frost and should therefore not be stored at temperatures below 5°C. Avoid freezing!

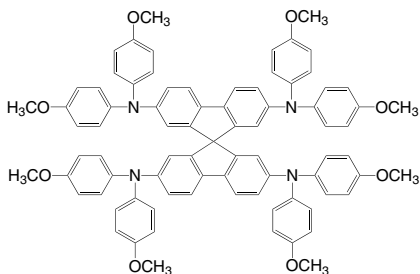


## Perovskite-based Photodiodes

## LT-S922 | Spiro-MeOTAD

2,2',7,7'-Tetrakis(*N,N*-di-*p*-methoxyphenylamino)-9,9'-spirobifluorene

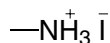
CAS No. : 207739-72-8  
 Grade : >99.5% (HPLC)  
 Formula : C<sub>81</sub>H<sub>66</sub>N<sub>4</sub>O<sub>8</sub>  
 M.W. : 1225.43 g/mole  
 UV : 306, 385 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 429 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : >360 °C (0.5% weight loss)



## LT-S9126 | MAI

Methylammonium iodide

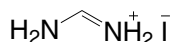
CAS No. : 14965-49-2  
 Grade : >99.5% , recrystallized 4 times  
 Formula : CH<sub>5</sub>I  
 M.W. : 158.97 g/mole



## LT-S9136 | FAI

Formamidinium iodide

CAS No. : 879643-71-7  
 Grade : >99.5% , recrystallized 4 times  
 Formula : CH<sub>5</sub>IN<sub>2</sub>  
 M.W. : 171.97 g/mole



## LT-S9147 | Pbl2

Lead(II) iodide

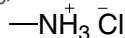
CAS No. : 10101-63-0  
 Grade : 99.999% (trace metals basis)  
 Formula : Pbl<sub>2</sub>  
 M.W. : 461.01 g/mole



## LT-S9151 | Methylammonium chloride

Methylammonium chloride

CAS No. : 593-51-1  
 Grade : >99.5% , recrystallized 4 times  
 Formula : CH<sub>5</sub>ClN  
 M.W. : 67.52 g/mole



## LT-S9251 |

Phenethylammonium iodide

CAS No. : 151059-43-7  
 Grade : >99.5% , recrystallized 4 times  
 Formula : C<sub>8</sub>H<sub>12</sub>IN  
 M.W. : 249.09 g/mole

