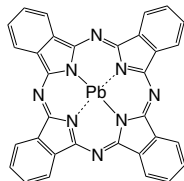


Small Molecular / Oligomer

LT-D2004 | PbPC

Lead(II) phthalocyanine

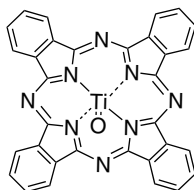
CAS No. : 15187-16-3
 Grade : Sublimed, >99%
 Formula : $C_{32}H_{16}N_8Pb$
 M.W. : 719.74 g/mole
 UV : 698 nm (in DMF)



LT-E206 | TiOPC

Titanium oxide phthalocyanine

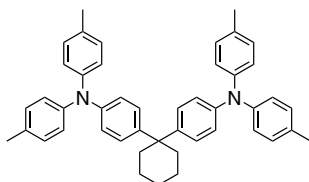
CAS No. : 26201-32-1
 Grade : Sublimed, > 99%
 Formula : $C_{32}H_{16}N_8OTi$
 M.W. : 576.39 g/mole
 UV : 349, 692 nm
 PL : 392 (in film)
 TGA : > 440°C (0.5% weight loss)



LT-N137 | TAPC

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

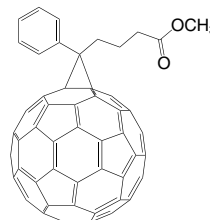
CAS No. : 58473-78-2
 Grade : Sublimed, > 99.5% (HPLC)
 Formula : $C_{46}H_{46}N_2$
 M.W. : 626.87 g/mole
 UV : 305 nm (in THF)
 PL : 414 nm (in THF)
 TGA : > 290 °C (0.5% weight loss)
 Solvent : Toluene, Chloroform



LT-S905 | PCBM

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

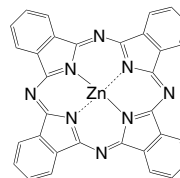
CAS No. : 160848-22-6
 Grade : > 99.5% (HPLC)
 Formula : $C_{72}H_{14}O_2$
 M.W. : 910.88 g/mole
 UV : 258, 328 nm (in THF)



LT-S906 | ZnPC

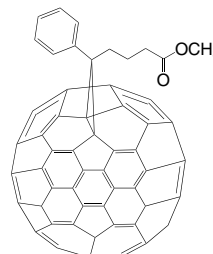
Zinc phthalocyanine

CAS No. : 14320-04-8
 Grade : Sublimed, > 99%
 Formula : $C_{32}H_{16}N_8Zn$
 M.W. : 577.92 g/mole
 PL : 534 nm (in CH_2Cl_2)

LT-S923 | PC₇₁BM

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

CAS No. : 609771-63-3
 Grade : > 99% (HPLC)
 Formula : $C_{82}H_{14}O_2$
 M.W. : 1030.93 g/mole
 UV : 372 nm (in Toluene)
 TGA : > 360°C (0.5% weight loss)

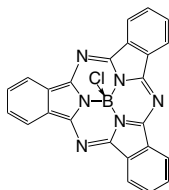


Small Molecular / Oligomer

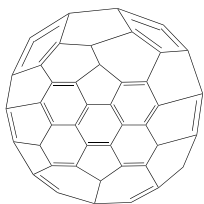
LT-S943 | SubPC

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)

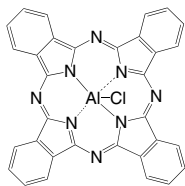
**LT-S967** | C_{70} (5,6)-Fullerene- C_{70}

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

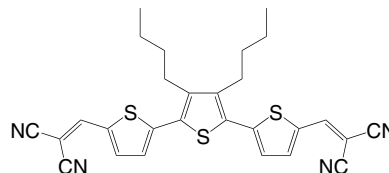
Aluminum phthalocyanine chloride

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

**LT-S9125** | DCV3T

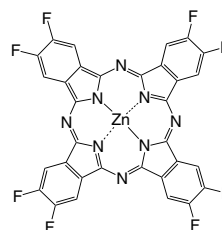
3',4'-Dibutyl-5,5''-bis(dicyanovinyl)-2,2':5',2''-terthiophene

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_8ZnPc

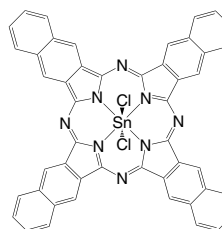
Zinc(II)-2,3,9,10,16,17,23,24-octafluoro-29H,31H-phthalocyanine

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** | $SnNCCI_2$

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)

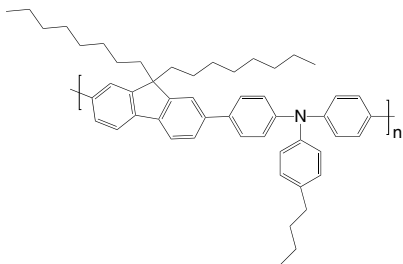


Polymers

LT-N174

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

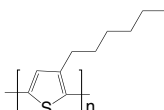
CAS No. : 223569-31-1
 Grade : $M_w > 30,000$ (GPC)
 Formula : $(C_{51}H_{61}N)_n$
 UV : 385 nm (in THF)
 PL : 434 nm (in THF)
 Solubility : Soluble in $CHCl_3$, Chlorobenzene, Dichlorobenzene



LT-S909 | P3HT

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

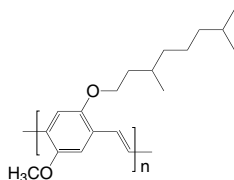
CAS No. : 104934-50-1
 Grade : $M_w > 45,000$ (GPC); Electronic Grade: Regio Regular > 93%
 Formula : $(C_{10}H_{14}S)_n$
 UV : 445 nm (in THF)
 PL : 564 nm (in THF)
 Solubility : Soluble in $CHCl_3$, Chlorobenzene, Dichlorobenzene



LT-S932 | MDMO-PPV

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

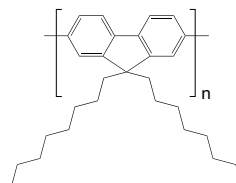
CAS No. : 177716-59-5
 Grade : $M_w > 100,000$ (GPC)
 Formula : $(C_{19}H_{28}O_2)_n$
 UV : 485 nm (in CH_2Cl_2)
 PL : 555 nm (in CH_2Cl_2)
 Solubility : Soluble in THF, $CHCl_3$, Chlorobenzene, Dichlorobenzene



LT-S933 | PFO

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

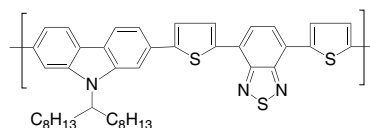
CAS No. : 123864-00-6
 Grade : $M_w = 50,000 \sim 150,000$ (GPC)
 Formula : $(C_{29}H_{40})_n$
 UV : 376 nm (in THF)
 PL : 426 nm (in THF)
 Solubility : Soluble in THF, $CHCl_3$, Chlorobenzene, Dichlorobenzene



LT-S948 | PCDTBT

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

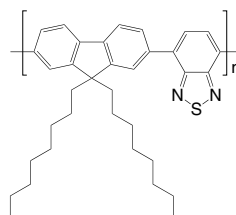
CAS No. : 958261-50-2
 Grade : $M_w = 20,000 \sim 100,000$ (GPC)
 Formula : $(C_{43}H_{47}N_3S_3)_n$
 UV : 390, 554 nm (in THF)
 PL : 639 nm (in THF)
 Solubility : > 5 mg/mL in $CHCl_3$



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

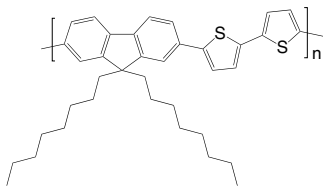


Polymers

LT-S979 | F8T2

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

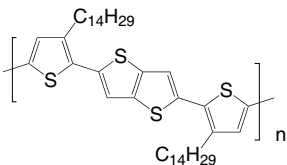
CAS No. : 210347-56-1
 Grade : $M_w > 20,000$ (GPC)
 Formula : $(C_{37}H_{44}S_2)_n$
 UV : 454 nm (in THF)
 PL : 500 nm (in THF)
 Solubility : Soluble in $CHCl_3$, Chlorobenzene, Dichlorobenzene



LT-S982 | PBTTC-14

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

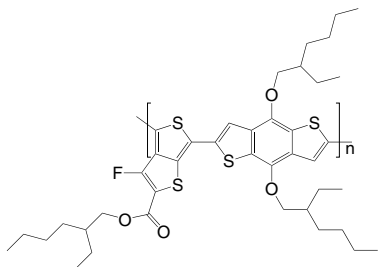
CAS No. : 888491-19-8
 Grade : $M_w > 40,000$ (GPC)
 Formula : $(C_{42}H_{62}S_4)_n$
 UV : 466 nm (in THF)
 PL : 557 nm (in THF)
 Solubility : > 5 mg/mL in $CHCl_3$



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]

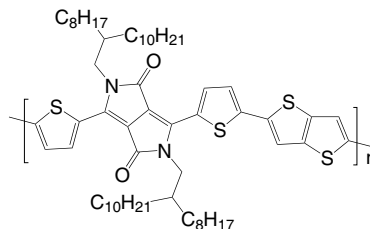
CAS No. : 1266549-31-8
 Grade : $M_w > 20,000$ (GPC)
 Formula : $(C_{41}H_{53}FO_4S_4)_n$
 UV : 670 nm (in CH_2Cl_2)
 Solubility : Soluble in $CHCl_3$, Chlorobenzene, Dichlorobenzene



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]

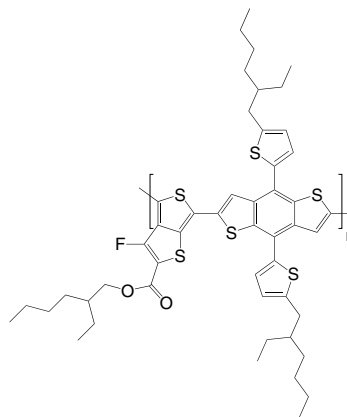
CAS No. : 1260685-65-1
 Grade : $M_w > 30,000$ (GPC)
 Formula : $(C_{60}H_{88}N_2O_2S_4)_n$
 UV : 810 nm (in $CHCl_3$)
 Solubility : Soluble in $CHCl_3$, Chlorobenzene, Dichlorobenzene



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

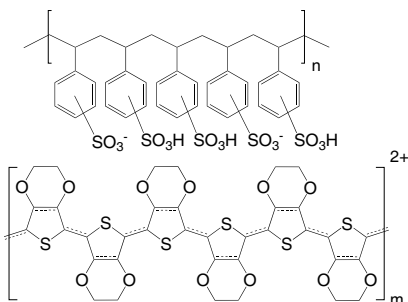
Description : Aqueous dispersion, blue liquid.
 Sodium : Max. 400 ppm
 Sulfate : Max. 40 ppm
 Solid content: 1.3 - 1.7 wt%
 PSD d50 : 80 nm
 PSD d90 : 100 nm
 Resistivity : 500-5000 Ωcm
 Viscosity : 5-12 mPas

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!

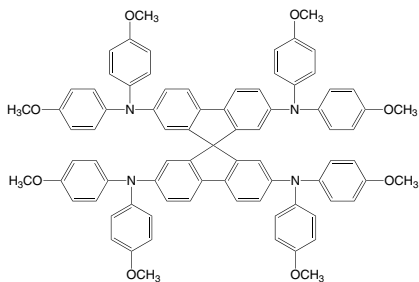


Perovskite-based Photodiodes

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 : $C_{81}H_{66}N_4O_8$
 M.W. : 1225.43 g/mole
 UV : 306, 385 nm (in CH_2Cl_2)
 PL : 429 nm (in CH_2Cl_2)
 TGA : > 360 °C (0.5% weight loss)



LT-S9126 | MAI

Methylammonium iodide

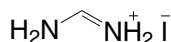
CAS No. : 14965-49-2
 Grade : >99.5% , recrystallized 4 times
 Formula : CH_5IN
 M.W. : 158.97 g/mole



LT-S9136 | FAI

Formamidinium iodide

CAS No. : 879643-71-7
 Grade : >99.5% , recrystallized 4 times
 Formula : CH_5IN_2
 M.W. : 171.97 g/mole

LT-S9147 | PbI₂

Lead(II) iodide

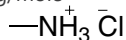
CAS No. : 10101-63-0
 Grade : 99.999% (trace metals basis)
 Formula : PbI_2
 M.W. : 461.01 g/mole



LT-S9151 | Methylammonium chloride

Methylammonium chloride

CAS No. : 593-51-1
 Grade : > 99.5% , recrystallized 4 times
 Formula : CH_5ClN
 M.W. : 67.52 g/mole



LT-S9251 |

Phenethylammonium iodide

CAS No. : 151059-43-7
 Grade : > 99.5% , recrystallized 4 times
 Formula : $C_8H_{12}IN$
 M.W. : 249.09 g/mole

