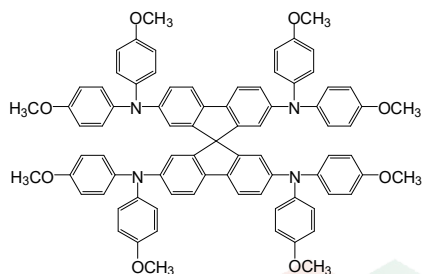


### LT-S922 | Spiro-MeOTAD

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>68</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)

Reference : 1. *MRS. BULLETIN*, 30, 2005, p23  
 2. *Appl. Phys. Lett.* 100, 173512 (2012)

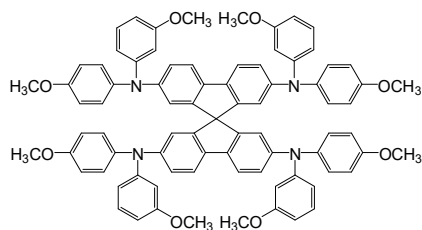


### LT-S9145 | p,m-Spiro-MeOTAD

*N*<sup>2</sup>,*N*<sup>2</sup>,*N*<sup>7</sup>,*N*<sup>7</sup>-Tetrakis(3-methoxyphenyl)-*N*<sup>2</sup>,*N*<sup>2</sup>,*N*<sup>7</sup>,*N*<sup>7</sup>-tetrakis(4-methoxyphenyl)-9,9'-spirobifluorene]-2,2',7,7'-tetraamine

CAS No. : 1573202-44-4  
 Grade : > 99% (HPLC)  
 Formula : C<sub>81</sub>H<sub>68</sub>N<sub>4</sub>O<sub>8</sub>  
 M.W. : 1225.43 g/mole  
 UV : 308, 378 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 414 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 280 °C (0.5% weight loss)

Reference : *J. Am. Chem. Soc.* 2014, 136, 7837-7840

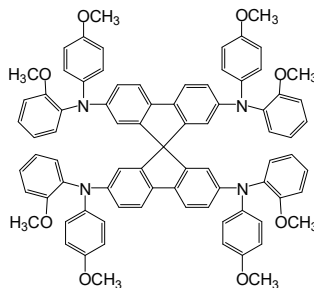


### LT-S9146 | p,o-Spiro-MeOTAD

*N*<sup>2</sup>,*N*<sup>2</sup>,*N*<sup>7</sup>,*N*<sup>7</sup>-Tetrakis(2-methoxyphenyl)-*N*<sup>2</sup>,*N*<sup>2</sup>,*N*<sup>7</sup>,*N*<sup>7</sup>-tetrakis(4-methoxyphenyl)-9,9'-spirobifluorene]-2,2',7,7'-tetraamine

CAS No. : 1628961-22-7  
 Grade : > 98.5% (HPLC)  
 Formula : C<sub>81</sub>H<sub>68</sub>N<sub>4</sub>O<sub>8</sub>  
 M.W. : 1225.43 g/mole  
 UV : 316, 375 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 418 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 280 °C (0.5% weight loss)

Reference : *J. Am. Chem. Soc.* 2014, 136, 7837-7840

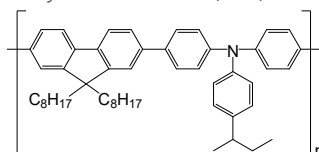


### LT-N148 | TFB

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

CAS No. : 220797-16-0  
 Grade : M<sub>w</sub> > 30,000 (GPC)  
 Formula : (C<sub>51</sub>H<sub>61</sub>N)<sub>n</sub>  
 UV : 389 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 443 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 Solubility : Soluble in CH<sub>2</sub>Cl<sub>2</sub>, Toluene, CHCl<sub>3</sub>

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

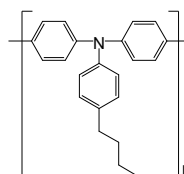


### LT-N149 | Poly-TPD

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

CAS No. : 472960-35-3  
 Grade : M<sub>w</sub> 20,000~200,000 (GPC)  
 Formula : (C<sub>22</sub>H<sub>21</sub>N)<sub>n</sub>  
 UV : 371, 388 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 424 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 Solubility : Soluble in CHCl<sub>3</sub>, Chlorobenzene

Reference : *Nature Photonics* 8, 128-132 (2014)

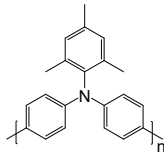


### LT-N168 | PTAA

Poly[bis(4-phenyl)(2,4,6-trimethylphenyl)amine]

CAS No. : 1333317-99-9  
 Grade :  $M_w > 10,000$  (GPC)  
 Formula :  $(C_{21}H_{19}N)_n$   
 UV : 371, 388 nm (in  $CH_2Cl_2$ )  
 PL : 424 nm (in  $CH_2Cl_2$ )  
 Solubility : Soluble in  $CHCl_3$ , Chlorobenzene, Dichlorobenzene

Reference : *Nature Photonics* 7, 486-491 (2013)

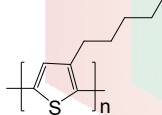


### LT-S909 | P3HT

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

CAS No. : 104934-50-1  
 Grade :  $M_w > 45,000$  (GPC)  
 Regioregular Electronic Grade > 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

Reference : *Journal of Power Sources*, 251, (2014), 152-156



### LT-PS001 | PEDOT:PSS

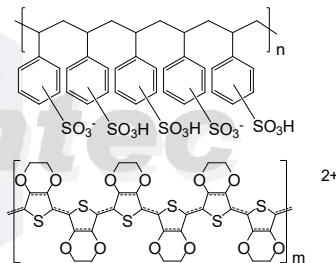
Poly(3,4-ethylenedioxythiophene)-poly(styrenesulfonate)

Specification  
 Description : Aqueous dispersion, blue liquid.  
 Sodium : Max. 400 ppm  
 Sulfate : Max. 40 ppm  
 Solid content : 1.3 - 1.7 wt%  
 PSD  $d_{50}$  : 80 nm  
 PSD  $d_{90}$  : 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!

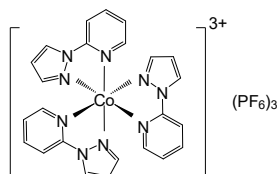


### LT-S9135 | FK102 Co(III) PF<sub>6</sub>-Salt

Tris(1-(pyridin-2-yl)-1H-pyrazol)cobalt(III) tris(hexafluorophosphate)

CAS No. : 1346416-70-3  
 Grade : > 99% (NMR)  
 Formula : C<sub>24</sub>H<sub>21</sub>CoF<sub>18</sub>N<sub>9</sub>P<sub>3</sub>  
 M.W. : 1169.43 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.96 V vs NHE

Reference : *J. Am. Chem. Soc.*, 2011, 133, 18042-18045

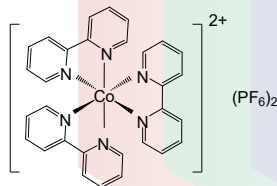


### LT-S9183 | Co(II)(bpy)<sub>3</sub>(PF<sub>6</sub>)<sub>2</sub>

Tris-(2,2'-bipyridine)cobalt(II) bis(hexafluorophosphate)

CAS No. : 79151-78-3  
 Grade : > 99% (NMR)  
 Formula : C<sub>30</sub>H<sub>24</sub>CoF<sub>12</sub>N<sub>6</sub>P<sub>2</sub>  
 M.W. : 817.41 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.56 V vs NHE

Reference : *J. Am. Chem. Soc.*, 2010, 132, 16714

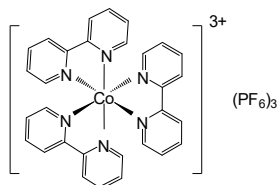


### LT-S9184 | Co(III) (bpy)<sub>3</sub>(PF<sub>6</sub>)<sub>3</sub>

Tris-(2,2'-bipyridine)cobalt(III) tris(hexafluorophosphate)

CAS No. : 28277-53-4  
 Grade : > 99% (NMR)  
 Formula : C<sub>30</sub>H<sub>24</sub>CoF<sub>18</sub>N<sub>6</sub>P<sub>3</sub>  
 M.W. : 962.38 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.56 V vs NHE

Reference : *Chem. Mater.*, 2013, 25 (13), pp 2733-2739

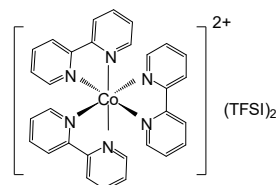


### LT-S9185 | Co(II)(bpy)<sub>3</sub>(TFSI)<sub>2</sub>

Tris-(2,2'-bipyridine)cobalt(II) bis(trifluoromethanesulfonimide)

CAS No. : 1353745-90-0  
 Grade : > 99% (NMR)  
 Formula : C<sub>34</sub>H<sub>24</sub>CoF<sub>12</sub>N<sub>8</sub>O<sub>8</sub>S<sub>4</sub>  
 M.W. : 1087.78 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.57 V vs NHE

Reference : *Chem. Mater.*, 2013, 25 (13), pp 2733-2739

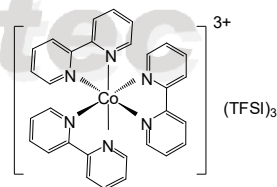


### LT-S9186 | Co(III)(bpy)<sub>3</sub>(TFSI)<sub>3</sub>

Tris-(2,2'-bipyridine)cobalt(III) tris(trifluoromethanesulfonimide)

CAS No. : 1353745-91-1  
 Grade : > 99% (NMR)  
 Formula : C<sub>36</sub>H<sub>24</sub>CoF<sub>18</sub>N<sub>8</sub>O<sub>12</sub>S<sub>6</sub>  
 M.W. : 1367.92 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.57 V vs NHE

Reference : *Chem. Mater.*, 2013, 25 (13), pp 2733-2739

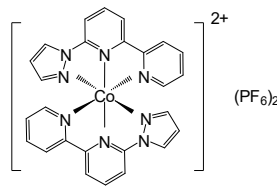


### LT-S9187 | Co(II)(bpy-pz)<sub>2</sub>(PF<sub>6</sub>)<sub>2</sub>

Bis(6-(1H-pyrazol-1-yl)-2,2'-bipyridine)cobalt(II) bis(hexafluorophosphate), mixture of stereoisomers

CAS No. : 312322-08-0  
 Grade : > 99% (NMR)  
 Formula : C<sub>26</sub>H<sub>20</sub>CoF<sub>12</sub>N<sub>8</sub>P<sub>2</sub>  
 M.W. : 793.35 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.86 V vs NHE

Reference : 1. *Phys. Chem. Chem. Phys.*, 2013, 15, 7087-7097  
 2. *Nat. Commun.* 3:631



# Dye-Sensitized Solar Cell (DSSC)

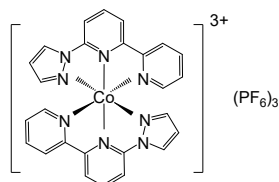
## Redox Couple Electrolytes Materials

### LT-S9188 | Co(III)(bpy-pz)<sub>2</sub>(PF<sub>6</sub>)<sub>3</sub>

Bis(6-(1H-pyrazol-1-yl)-2,2'-bipyridine)cobalt(III) tris(hexafluorophosphate), mixture of stereoisomers

CAS No. : 1346417-60-4  
 Grade : > 99% (NMR)  
 Formula : C<sub>26</sub>H<sub>20</sub>CoF<sub>18</sub>N<sub>8</sub>P<sub>3</sub>  
 M.W. : 938.32 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.86 V vs NHE

Reference : 1. *Phys. Chem. Chem. Phys.*, 2013, 15, 7087-7097  
 2. *Nat. Commun.* 3:631

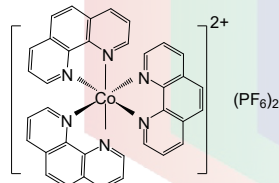


### LT-S9191 | Co(II)(phen)<sub>3</sub>(PF<sub>6</sub>)<sub>2</sub>

Tris(1,10-phenanthroline)cobalt(II) bis(hexafluorophosphate)

CAS No. : 31876-74-1  
 Grade : > 99% (NMR)  
 Formula : C<sub>36</sub>H<sub>24</sub>CoF<sub>12</sub>N<sub>6</sub>P<sub>2</sub>  
 M.W. : 889.48 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.61 V vs NHE

Reference : *Phys. Chem. Chem. Phys.*, 2013, 15, 7087-7097

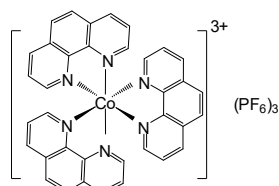


### LT-S9192 | Co(III)(phen)<sub>3</sub>(PF<sub>6</sub>)<sub>3</sub>

Tris(1,10-phenanthroline)cobalt(III) tris(hexafluorophosphate)

CAS No. : 28277-59-0  
 Grade : > 99% (NMR)  
 Formula : C<sub>36</sub>H<sub>24</sub>CoF<sub>18</sub>N<sub>6</sub>P<sub>3</sub>  
 M.W. : 1034.44 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.61 V vs NHE

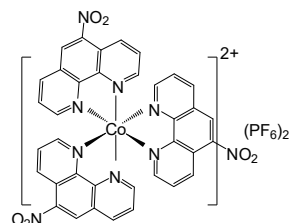
Reference : *Phys. Chem. Chem. Phys.*, 2013, 15, 7087-7097



### LT-S9193 | Co(II)(NO<sub>2</sub>-phen)<sub>3</sub>(PF<sub>6</sub>)<sub>2</sub>

Tris(5-nitro-1,10-phenanthroline)cobalt(II) bis(hexafluorophosphate)

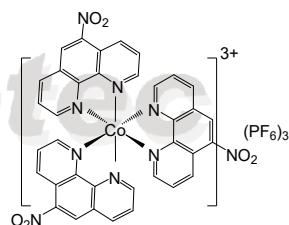
Grade : > 99% (NMR)  
 Formula : C<sub>36</sub>H<sub>21</sub>CoF<sub>12</sub>N<sub>9</sub>O<sub>6</sub>P<sub>2</sub>  
 M.W. : 1024.47 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.85 V vs NHE



### LT-S9194 | Co(III)(NO<sub>2</sub>-phen)<sub>3</sub>(PF<sub>6</sub>)<sub>3</sub>

Tris(5-nitro-1,10-phenanthroline)cobalt(III) tris(hexafluorophosphate)

Grade : > 99% (NMR)  
 Formula : C<sub>36</sub>H<sub>21</sub>CoF<sub>18</sub>N<sub>9</sub>O<sub>6</sub>P<sub>3</sub>  
 M.W. : 1169.43 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.85 V vs NHE

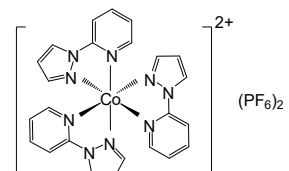


### LT-S9195 | FK102 Co(II) PF<sub>6</sub> Salt

Tris(1-(pyridin-2-yl)-1H-pyrazol)cobalt(II) bis(hexafluorophosphate)

CAS No. : 1392221-69-0  
 Grade : > 99%  
 Formula : C<sub>24</sub>H<sub>21</sub>CoF<sub>12</sub>N<sub>9</sub>P<sub>2</sub>  
 M.W. : 784.35 g/mol  
 E<sup>0</sup><sub>2+/3+</sub> : 0.96 V vs NHE

Reference : *J.Mater. Chem. A*, 2015,3, 12159-12162

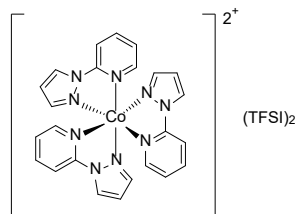


# Dye-Sensitized Solar Cell (DSSC)

## Redox Couple Electrolytes Materials

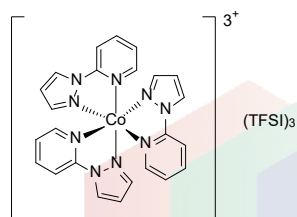
### LT-S9406 | FK 102 Co(II) TFSI Salt

Grade :  $\geq 98\%$   
Formula :  $C_{28}H_{21}CoN_{11}O_8S_4F_{12}$   
M.W. : 1054.72 g/mol



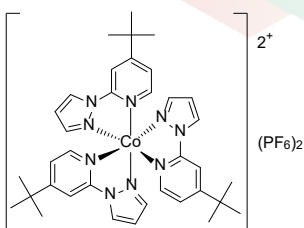
### LT-S9407 | FK 102 Co(III) TFSI Salt

Grade :  $\geq 98\%$   
Formula :  $C_{30}H_{21}CoN_{12}O_{12}S_6F_{18}$   
M.W. : 1334.87 g/mol



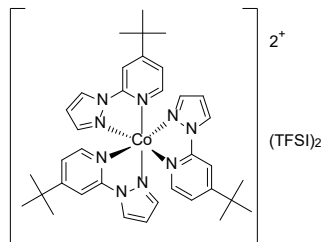
### LT-S9408 | FK 209 Co(II) PF6 salt

Grade :  $\geq 98\%$   
Formula :  $C_{36}H_{45}CoN_9P_2F_{12}$   
M.W. : 952.68 g/mol



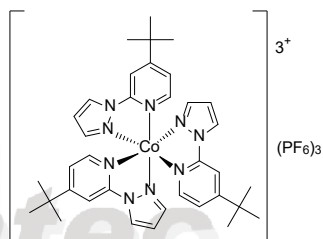
### LT-S9409 | FK 209 Co(II) TFSI salt

Grade :  $\geq 98\%$   
Formula :  $C_{40}H_{45}CoN_{11}O_8S_4F_{12}$   
M.W. : 1223.02 g/mol



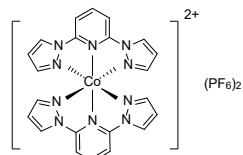
### LT-S9410 | FK 209 Co(III) PF6 salt

Grade :  $\geq 98\%$   
Formula :  $C_{36}H_{45}CoN_9P_3F_{18}$   
M.W. : 1097.64 g/mol



### LT-S9412 | FK 269 Co(II) PF6 salt

Grade :  $\geq 98\%$   
Formula :  $C_{22}H_{18}CoN_{10}P_2F_{12}$   
M.W. : 771.31 g/mol

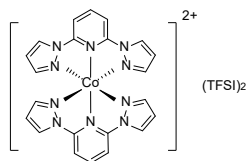


# Dye-Sensitized Solar Cell (DSSC)

## Redox Couple Electrolytes Materials

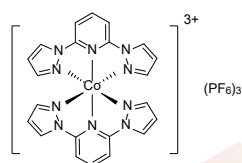
### LT-S9413 | FK 269 Co(II) TFSI salt

Grade :  $\geq 98\%$   
Formula :  $C_{26}H_{18}CoN_{12}O_8S_4F_{12}$   
M.W. : 1041.67 g/mol



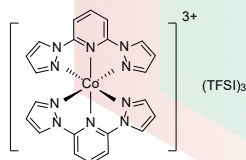
### LT-S9414 | FK 269 Co(III) PF6 salt

Grade :  $\geq 98\%$   
Formula :  $C_{22}H_{18}CoN_{10}P_3F_{18}$   
M.W. : 916.27 g/mol



### LT-S9415 | FK 269 Co(III) TFSI salt

Grade :  $\geq 98\%$   
Formula :  $C_{26}H_{18}CoN_{13}O_{12}S_6F_{18}$   
M.W. : 1321.83 g/mol

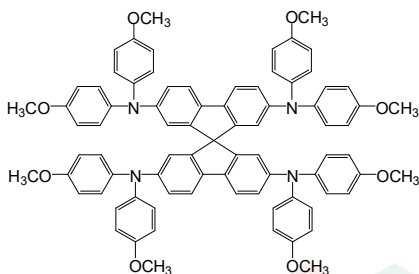


Lumtec

### LT-S922 | Spiro-MeOTAD

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

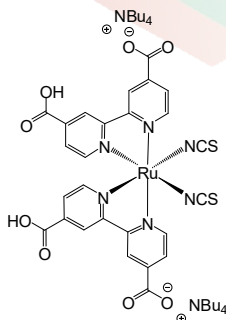
CAS No. : 207739-72-8  
 Grade : > 99.5% (HPLC)  
 Formula : C<sub>81</sub>H<sub>68</sub>N<sub>4</sub>O<sub>8</sub>  
 M.W. : 1225.43 g/mole  
 UV : 306, 385 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 PL : 429 nm (in CH<sub>2</sub>Cl<sub>2</sub>)  
 TGA : > 360 °C (0.5% weight loss)  
 Reference : 1.MRS. BULLETIN, 30, 2005, p23  
 2.Appl. Phys. Lett. 100, 173512 (2012)



### LT-S945 | N719

Di-tetrabutylammonium *cis*-bis(isothiocyanato)bis(2,2'-bipyridyl-4,4'-dicarboxylato)ruthenium(II)

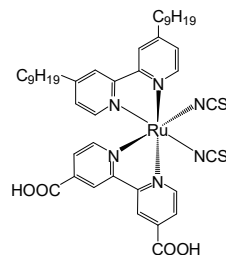
CAS No. : 207347-46-4  
 Grade : > 98% (HPLC)  
 Formula : C<sub>58</sub>H<sub>86</sub>N<sub>8</sub>O<sub>8</sub>RuS<sub>2</sub>  
 M.W. : 1188.55 g/mole  
 UV : 313, 534 nm (in EtOH)  
 Reference : Inorg. Chem. 1999, 38, 6298-6305



### LT-S964 | Z-907

*cis*-Bis(isothiocyanato)(2,2'-bipyridyl-4,4'-dicarboxylato)(4,4'-di-nonyl-2'-bipyridyl)ruthenium(II)

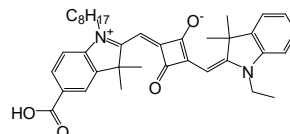
CAS No. : 502693-09-6  
 Grade : > 98% (HPLC)  
 Formula : C<sub>42</sub>H<sub>52</sub>N<sub>6</sub>O<sub>4</sub>RuS<sub>2</sub>  
 M.W. : 870.10 g/mole  
 UV : 295, 531 nm (in EtOH)  
 Reference : Nature Materials 2, 402-407 (2003)



### LT-S9037 | SQ01

(*E*)-4-((5-carboxy-3,3-dimethyl-1-octyl-3*H*-indolium-2-yl)methylene)-2-((*E*)-(1-ethyl-3,3-dimethylindolin-2-ylidene)methyl)-3-oxocyclobut-1-enolate

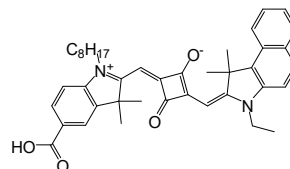
CAS No. : 951248-19-4  
 Grade : > 99% (HPLC)  
 Formula : C<sub>37</sub>H<sub>44</sub>N<sub>2</sub>O<sub>4</sub>  
 M.W. : 580.67 g/mole  
 UV : 637 nm (in DMF)  
 TGA : > 220 °C (0.5% weight loss)  
 Reference : Adv. Funct. Mater. 2009, 19, 2720-2727



### LT-S9038 | SQ02

(*E*)-4-((5-carboxy-3,3-dimethyl-1-octyl-3*H*-indolium-2-yl)methylene)-2-((*E*)-(3-ethyl-1,1-dimethyl-1*H*-benzo[e]indol-2(3*H*)-ylidene)methyl)-3-oxocyclobut-1-enolate

CAS No. : 1240041-84-2  
 Grade : > 99% (HPLC)  
 Formula : C<sub>41</sub>H<sub>46</sub>N<sub>2</sub>O<sub>4</sub>  
 M.W. : 630.81 g/mole  
 UV : 662 nm (in DMF)  
 TGA : > 250 °C (0.5% weight loss)  
 Reference : Adv. Funct. Mater. 2009, 19, 2720-2727

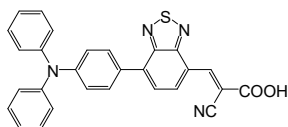


### LT-S9068 | RL-1

2-Cyano-3-(7-(4-(diphenylamino)phenyl)-benzo[c][1,2,5]thiadiazol-4-yl)acrylic acid

CAS No. : 1415134-59-6  
 Grade : > 99% (NMR)  
 Formula :  $C_{28}H_{18}N_4O_2S$   
 UV : 324, 486 nm (in THF)  
 TGA : > 240 °C (0.5% weight loss)

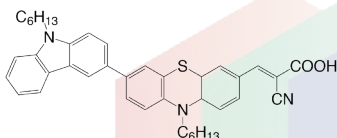
Reference : *Chem. Commun.* 2012, 48, 12071-12073



### LT-S9120 | PTCbCA

(E)-2-cyano-3-(10-hexyl-7-(9-hexyl-9H-carbazol-3-yl)-10H-phenothiazin-3-yl)acrylic acid

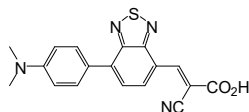
Grade : > 99% (NMR)  
 Formula :  $C_{40}H_{41}N_3O_2S$   
 M.W. : 627.84 g/mole



### LT-S9121 | CDMA-PBTCA

2-Cyano-3-(7-(4-(dimethylamino)phenyl)-benzo[c][1,2,5]thiadiazol-4-yl)acrylic acid

Grade : > 99% (NMR)  
 Formula :  $C_{18}H_{14}N_4O_2S$   
 M.W. : 350.39 g/mole

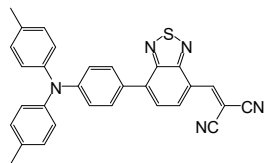


### LT-S9122 | DTDCPB

2-((7-(4-(dip-tolylamino)phenyl)benzo[c][1,2,5]thiadiazol-4-yl)methylene)malononitrile

CAS No. : 1393343-58-2  
 Grade : > 99% (NMR)  
 Formula :  $C_{30}H_{21}N_5S$   
 M.W. : 483.59 g/mole  
 UV : 306, 568 nm (in  $CH_2Cl_2$ )

Reference : *ACS Nano*, 2014, 8 (2), pp 1674-1680

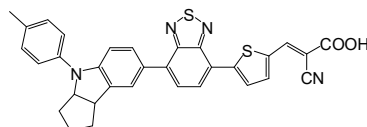


### LT-S9166 | WS-2

(E)-2-cyano-3-(5-(7-(4-(p-tolyl)-1,2,3,3a,4,8b-hexahydrocyclopenta[b]indol-7-yl)benzo[c][1,2,5]thiadiazol-4-yl)thiophen-2-yl)acrylic acid

CAS No. : 1263863-11-1  
 Grade : > 99% (HPLC)  
 Formula :  $C_{32}H_{24}N_4O_2S_2$   
 M.W. : 560.6900 g/mole  
 UV : 546 nm (in  $CH_2Cl_2$ )

Reference : 1. *MRS. BULLETIN*, 30, 2005, p23  
 2. *Appl. Phys. Lett.* 100, 173512 (2012)

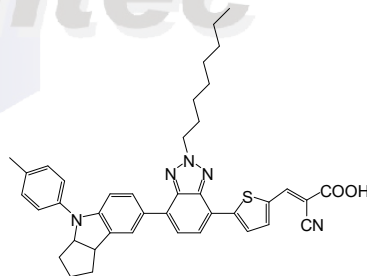


### LT-S9167 | WS-5

(E)-2-cyano-3-(5-(2-octyl-7-(4-(p-tolyl)-1,2,3,3a,4,8b-hexahydrocyclopenta[b]indol-7-yl)-2H-benzo[d][1,2,3]triazol-4-yl)thiophen-2-yl)acrylic acid

CAS No. : 1334739-85-3  
 Grade : > 99% (HPLC)  
 Formula :  $C_{40}H_{41}N_5O_2S$   
 M.W. : 655.8610 g/mole  
 UV : 496 nm (in  $CH_2Cl_2$ )

Reference : *Chem. Mater.* 2011, 23, 4394; *ACS Appl. Mater. Interfaces* 2014, 6, 14621



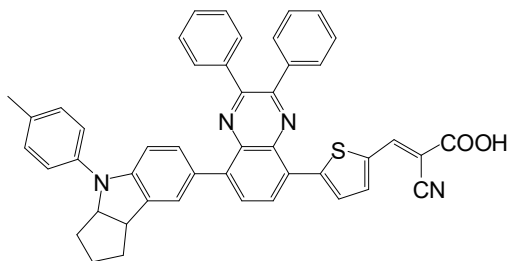


### LT-S9168 | IQ-4

(E)-2-cyano-3-(5-(2,3-diphenyl-8-(4-(p-tolyl)-1,2,3,3a,4,8b-hexahydrocyclopenta[b]indol-7-yl)quinoxalin-5-yl)thiophen-2-yl)acrylic acid

CAS No. : 1440205-23-1  
 Grade : > 99% (HPLC)  
 Formula :  $C_{46}H_{34}N_4O_2S$   
 M.W. : 706.8640 g/mole  
 UV : 529 nm (in  $CH_2Cl_2$ )

Reference : *ACS Appl. Mater. Interfaces* 2013, 5, 4986; *J. Am. Chem. Soc.* 2014, 136, 5722.

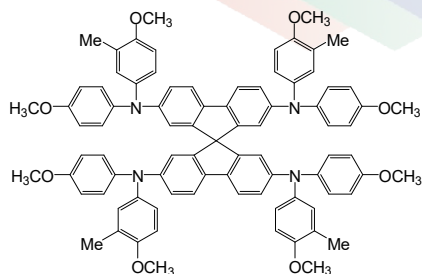


### LT-S9170 | Spiro-MeOTAD-HTM1

2,2',7,7'-Tetrakis(4,4'-dimethoxy-3-methyldiphenylamino)-9,9'-spirobifluorene

CAS No. : 1573202-31-9  
 Grade : > 99% (HPLC)  
 Formula :  $C_{85}H_{76}N_4O_8$   
 M.W. : 1281.53 g/mole  
 UV : 306, 385 nm (in  $CH_2Cl_2$ )  
 PL : 429 nm (in  $CH_2Cl_2$ )

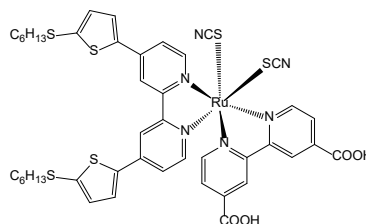
Reference : *ACS Appl. Mater. Interfaces* 2015, 7, 11107-11116



### LT-S9416 | C106 Dye

C106 Dye

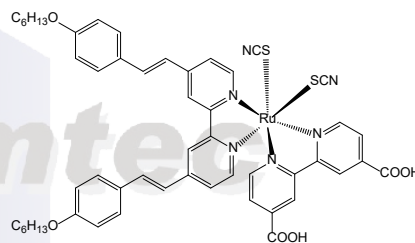
CAS No. : 1152310-69-4  
 Grade : ≥ 90%  
 Formula :  $C_{44}H_{44}N_6O_4RuS_6$   
 M.W. : 1014.32 g/mole



### LT-S9416 | K19 Dye

K19 Dye

CAS No. : 847665-45-6  
 Grade : ≥ 90%  
 Formula :  $C_{52}H_{52}N_6O_6RuS_2$   
 M.W. : 1022.21 g/mole



### LT-S9418 | N749 Black Dye

N749 Black Dye

CAS No. : 359415-47-7  
 Grade : ≥ 95%  
 Formula :  $C_{69}H_{117}N_9O_6RuS_3$   
 M.W. : 1364.98 g/mole

