

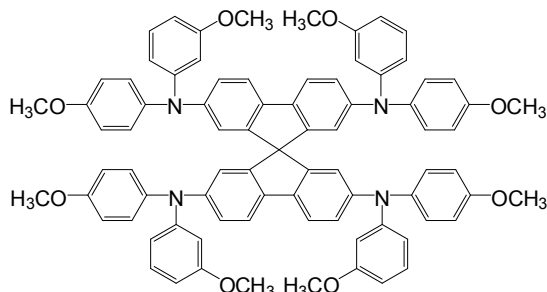


o-Methoxy Substituents in Spiro-OMeTAD for Efficient Inorganic Organic Hybrid Perovskite Solar Cells

Product Specifications

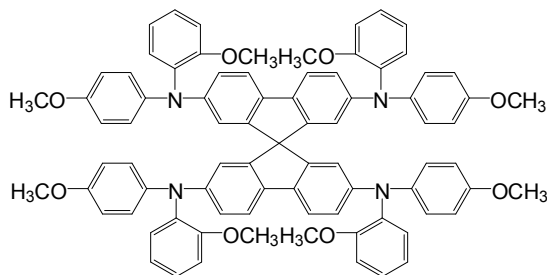
LT-S9145 p,m-Spiro-MeOTAD

CAS No.	1573202-44-4
Grade	Sublimed, > 99% (HPLC)
Formula	$C_{81}H_{68}N_4O_8$
Molecular Weight	1225.43 g/mole
Absorption	308, 378 nm (in CH_2Cl_2)
Photoluminescence	414 nm (in CH_2Cl_2)
<i>Reference : J. Am. Chem. Soc. 2014, 136, 7837-7840</i>	



LT-S9146 p,o-Spiro-MeOTAD

CAS No.	1628961-22-7
Grade	Sublimed, > 99% (HPLC)
Formula	$C_{81}H_{68}N_4O_8$
Molecular Weight	1225.43 g/mole
Absorption	316, 375 nm (in CH_2Cl_2)
Photoluminescence	418 nm (in CH_2Cl_2)
<i>Reference : J. Am. Chem. Soc. 2014, 136, 7837-7840</i>	



Features

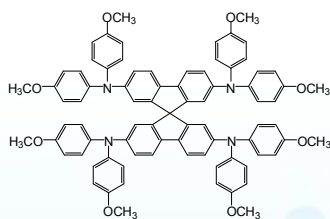
- The spiro-OMeTAD derivative was employed as hole-transporting materials (HTMs), and its performance was compared for the fabrication of mesoporous $TiO_2/CH_3NH_3PbI_3/HTM/Au$ solar cell.
- po-Spiro-OMeTAD showed highly improved performance by exhibiting a short-circuit current density of 21.2 mA/cm^2 , an open-circuit voltage of 1.02 V, and a fill factor of 77.6% under 1 sun illumination (100 mW/cm^2), which resulted in an overall PCE of 16.7%, compared to ~15% for conventional p-OMe substituent (LT-S922).

Device Application

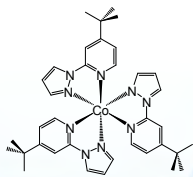
Best Perovskite Solar Cell :

FTO/ TiO_2 (250 nm)/ $CH_3NH_3I:PbI_2$ (350 nm)/HTMs(70 nm)/Au

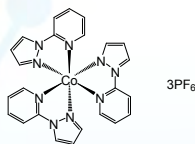
Related products from Lumtec :



LT-S922 Spiro-MeOTAD



LT-S9127 FK209



LT-S9127 FK209

PbI_2

LT-S9147

CH_3NH_3I

LT-S9126

$PbBr_2$

LT-S9152

CH_3NH_3Br

LT-S9137