

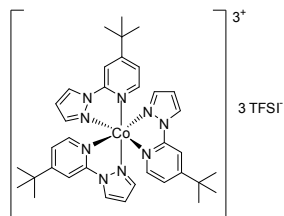


Novel Materials For High-Performance Perovskite-Sensitized Solar Cells

Product Specifications

LT-S9127

FK209

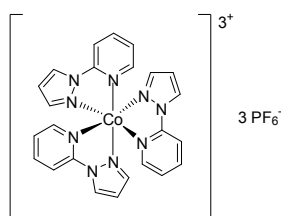


CAS No. 1447938-61-5
Formula $C_{44}H_{51}CoF_{18}N_{12}O_{12}S_6$
M.W. 1533.26 g/mole
Absorption 227, 285 nm (in ACN)

Reference : 1. Nature 499, 316–319 (18 July 2013)
 2. Chem. Mater. 2013, 25, 2986–2990

LT-S9135

FK102



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

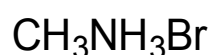
LT-S9126 Methylammonium iodide



Formula CH_6IN
M.W. 158.97 g/mole

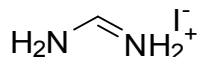
Reference : 1. Nature 499, 316–319 (18 July 2013)
 2. J. Mater. Chem. A, 2013, 1, 5628–5641

LT-S9137 Methylammonium bromide



Reference : J. Phys. Chem. C, 2014, April 17 (Web)

LT-S9136 Formamidinium iodide

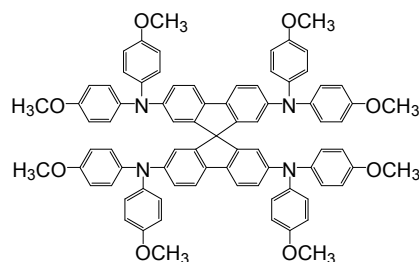


Reference : Energy Environ. Sci., 2014, 7, 982–988

LT-S922 Spiro-MeOTAD

Formula $C_{81}H_{68}N_4O_8$
Molecular Weight 1225.43 g/mole
Absorption 306, 385 nm (in CH_2Cl_2)
Grade > 99.5% (HPLC)

Reference : 1. Nature 499, 316–319 (18 July 2013)
 2. Appl. Phys. Lett. 100, 173512 (2012)



Features

- Solution-processed organic–inorganic hybrid perovskites $CH_3NH_3PbI_3$ have attracted attention as light-harvesting materials for mesoscopic solar cells.
- FK209 act as p-type dopant for tuning the conductivity of Spiro-MeOTAD in solid-state dye-sensitized solar cells.
- The solid-state dye-sensitized solar cell's device possesses high PCE of 15.0% with J_{sc} of 20.0 mA cm^{-2} , V_{oc} of 0.993 V, and FF of 73% , which is equal to or greater than those of today's best thin-film photovoltaic devices.