



Novel Materials for High-Performance Perovskite-Sensitized Solar Cells

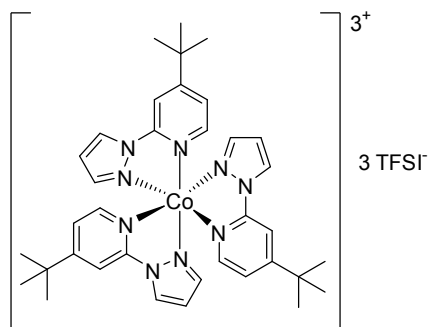
Product Specifications

CS10072

FK209

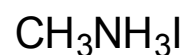
Formula $C_{44}H_{51}CoF_{18}N_{12}O_{12}S_6$
Molecular Weight 1533.26 g/mole
Absorption 227, 285 nm (in ACN)

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



CS10056 Methylammonium iodide

Formula CH_5IN
Molecular Weight 158.97 g/mole

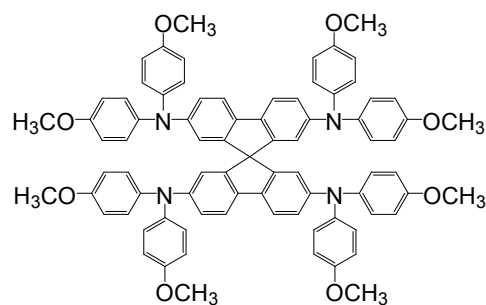


Reference : 1. Nature 499, 316–319 (18 July 2013)
2. J. Mater. Chem. A, 2013,1, 5628-5641

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.