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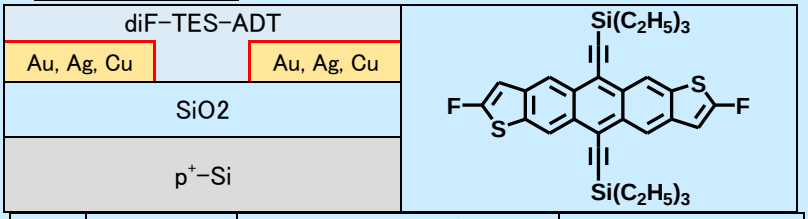
Pentafluorothiophenol (abb ; PFTP)

C_6F_5-SH

Purity	97%
CAS Number	771-62-0
Molecular Formula	C6HF5S
Molecular Weight	200.13
Application	1. Self-oriented single-layer PFTP is coated on Cu, Ag, and Au electrodes to improve hole mobility and contact resistance of organic FETs. PFTP-Cu is better than bare Au electrodes.

diF-TES-ADT

Org.FETstructure(Red; PFTP)



No.	Electrode	Hole mobility($cm^2V^{-1}S^{-1}$) $\lvert V_{GS}-V_T\rvert$=30V	Contact resistance (Ω ・cm) $\lvert V_{GS}-V_T\rvert$=30V
1	Bare-Ag	$1.2*10^{-4}$	$8.0*10^{7}$
2	Bare-Au	$1.0*10^{-2}$	$3.0*10^{7}$
3	PFTP-Cu	$3.1*10^{-2}$	$2.0*10^{6}$
4	PFTP-Ag	**$1.2*10^{-1}$**	$3.2*10^{5}$
5	PFTP-Au	**$1.3*10^{-1}$**	$8.0*10^{4}$

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2. Used for the preparation of gold particles with perfluorothiolate ligands. While the perflooloalkylthiolate single-layer coated gold particles of the Brust reaction method are soluble in the fluorus solvent, the TFTP-coated gold particles exhibit the property of being soluble in the hydrocarbon solvent.

Au55(PPh3)12Cl6 + excess-C6F5SH in CH2Cl2/RT*22hr → evaporate → CH3Ohwash/filtrate → Au75Gold particle（CH2Cl2、DMF、THF soluble）

Langmuir, 2008, 24, p310-315

Properties:	
Appearance	Liquid
Boiling point, °C	143-144
Melting point,°C	-24
Capacity:	150kg/month
Packing:	-
UN, PG:	-