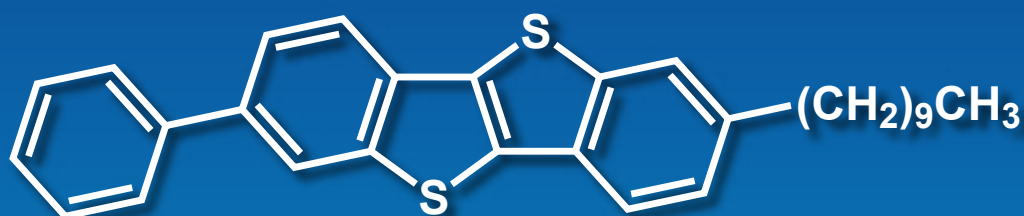


Super Performance Organic Semiconductor Ph-BTBT-10



Ph-BTBT-10 [for organic electronics]

100mg / 250mg / 1g

[D5491]

Advantages

- Practical hole mobility > 10 cm²/Vs
(ensured specification by a vapor diffusion method)
- Also available for solution processable device

Application

Organic Transistor Device

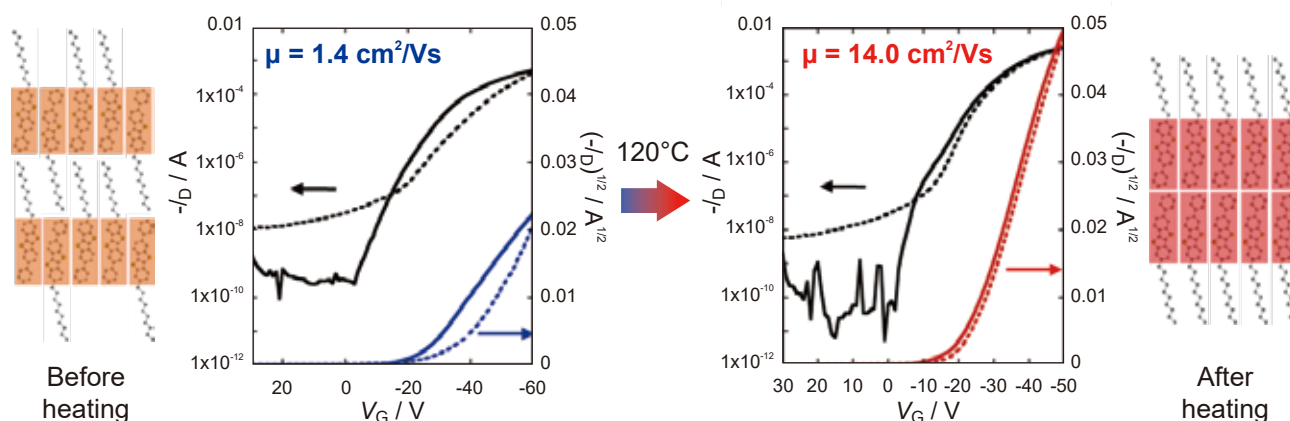


Table 1. OFET device characteristics with Ph-BTBT-10 (by own equipment)

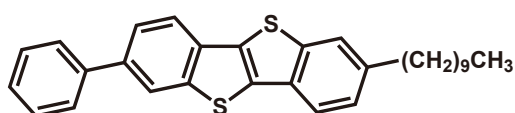
Material	SAM	Annealing Temp. (°C)	Hole Mobility (cm ² /Vs)	V _{th} (V)
Ph-BTBT-10 [D5491]	bare	w/o	0.87 - 0.91	-24
		120	4.24 - 4.86	-8
	ODTS [O0079]	w/o	1.40 - 1.42	-23
		120	10.3 - 14.0	-22

Report on molecular arrangement and liquid crystal phase by thermal annealing

Reference H. Iino, T. Usui, J. Hanna, *Nat. Commun.* **2015**, 6, 6828. <https://doi.org/10.1038/ncomms7828>

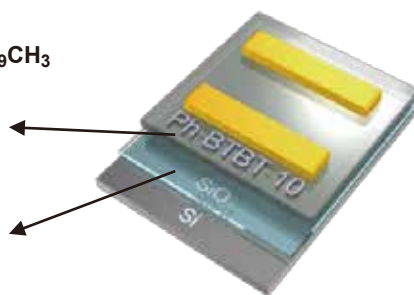
This product has been commercialized under the instruction of Prof. Jun-ichi Hanna.

Super Performance Organic Semiconductor: Ph-BTBT-10



Ph-BTBT-10 [D5491]

**Surface Treatment
ODTS [O0079]**



Top contact type
Channel length: 50 μm
Channel width: 1.5 mm
Organic layer: 40 nm
South, Drain : Au

Figure 1. OFET device structure with Ph-BTBT-10 [D5491]

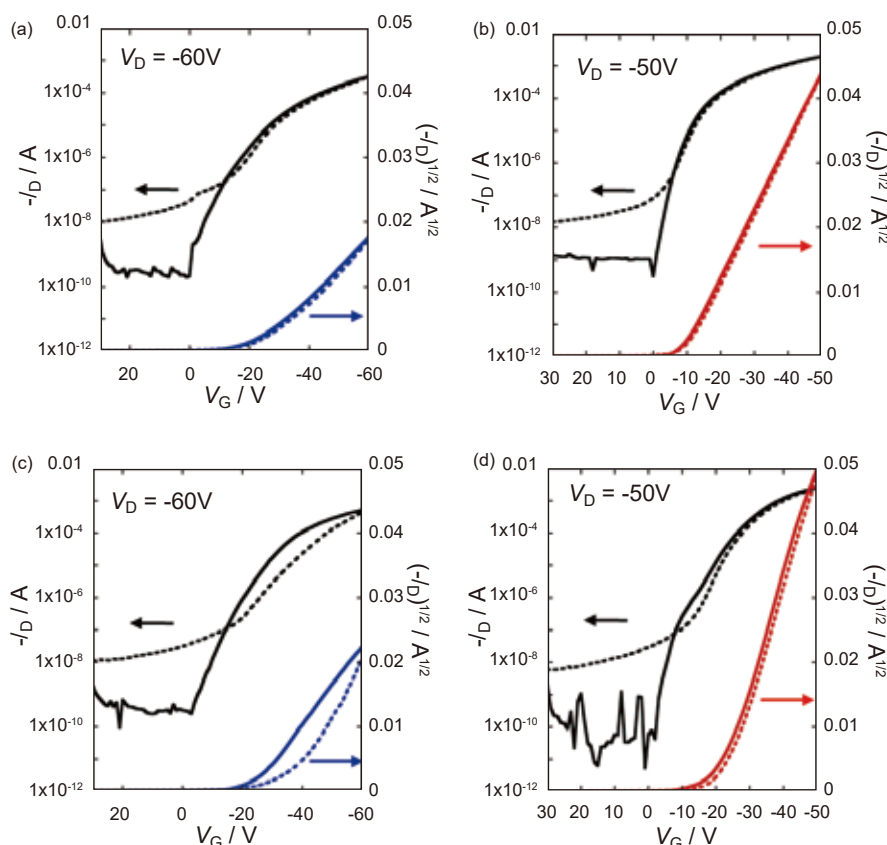


Figure 2. OFET device transport characteristics (by own equipment)

(a) w/o annealing (bare) (b) annealing 120°C , 5min (bare)
(c) w/o annealing (ODTS) (d) annealing 120°C , 5min (ODTS)

Related Products

Pentacene (99.999%, trace metals basis) (purified by sublimation)	100mg / 1g [P2524]
Pentacene (purified by sublimation)	100mg / 1g [P0030]
DPh-BTBT (purified by sublimation)	100mg [D3526]
2,6-Diphenylanthracene (purified by sublimation)	100mg [D5152]
exo-DNTT-PMI (DNTT-Precursor)	50mg [D5154]
P3HT (regioregular) [for organic electronics]	100mg / 500mg [P2513]
Octadecyltrichlorosilane (= ODTS)	25g [O0079]

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