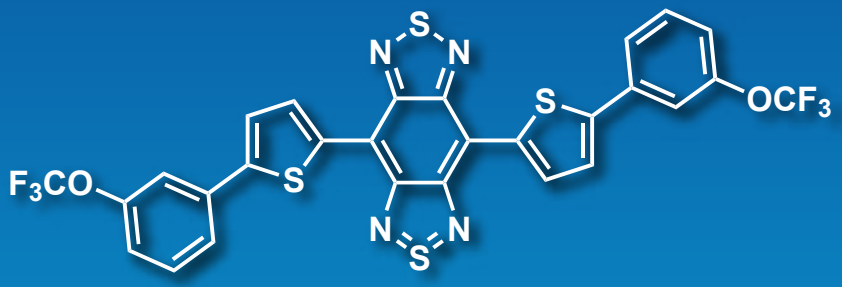
MATERIALS

High Mobility n-Type Organic Semiconductor TU-1



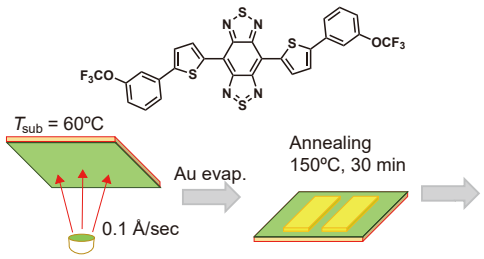
TU-1
100mg / 250mg
[T3922]

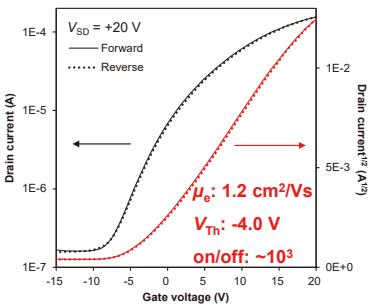
Advantages

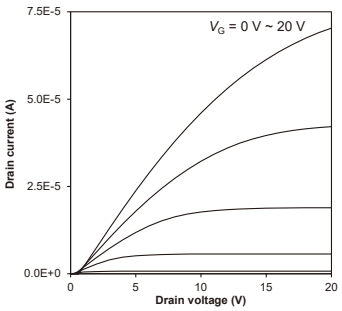
- Electron mobility >1 cm²/Vs
- Applicable to dry and/or wet processes

Performance evaluation of TU-1

TU-1-based device
(fabricated by vacuum deposition method)





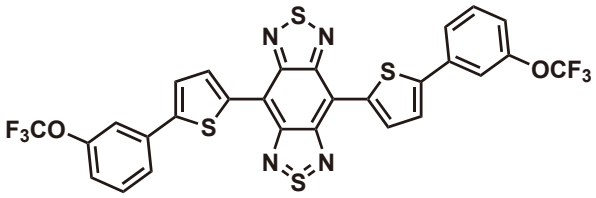


Previous research examples: M. Mamada *et al.*, *Chem. Mater.* **2015**, *27*, 141. https://doi.org/10.1021/cm503579m

TCI has evaluated and ensured semiconductor performance of OFET devices using our in-house equipment.

High Mobility n-Type Organic Semiconductor: TU-1

Quality assurance by OFET mobility



TU-1 [T3922]

Electron mobility: >0.50 cm^2/Vs (specification)

(SiO_2 / ODTS substrate)

OFET characteristics of the TU-1-based devices

Compound	Insulator	V_{SD}[V]	$\mu_{avg.}$[cm^2/Vs]	μ_{max}[cm^2/Vs]	V_{Th}[V]	on/off
TU-1 (vacuum deposition)	SiO_2	20	0.31 (0.01)	0.33	6.5 (0.2)	~10^6
	SiO_2	40	0.45 (0.01)	0.46	9.6 (0.1)	~10^7
	SiO_2 / ODTS	20	0.88 (0.18)	1.18	-1.1 (2.6)	~10^3

The values in parentheses are standard deviations. cPVP: cross-linked polyvinylphenol

TU-1 has product specifications for the electron mobilities (>0.50 cm^2/Vs) on OFET devices.

Related Products

High-quality p-type organic semiconductor

Ph-BTBT-10 100mg / 250mg / 1g [D5491]

Surface treatment agents

Octadecyltrichlorosilane (=ODTS) (>99.0%) 1g [T3815]

***n*-Octyltrichlorosilane (=OTS)** 25g / 250g [O0168]

1,1,1,3,3,3-Hexamethyldisilazane (=HMDS) 25mL / 100mL / 500mL [H0089]

For further information please refer to our website at www.TCIchemicals.com. ▶▶▶ TCI semiconductors

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TCI AMERICA
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TCI EUROPE N.V.
Tel : +32 (0)3 735 07 00
Fax : +32 (0)3 735 07 01
E-mail : Sales-EU@TCIchemicals.com

TCI Deutschland GmbH
Tel : +49 (0)6196 64053-00
Fax : +49 (0)6196 64053-01
E-mail : Sales-DE@TCIchemicals.com

Tokyo Chemical Industry UK Ltd.
Tel : +44 (0)1865 78 45 60
E-mail : Sales-UK@TCIchemicals.com

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Tel : 800-988-0390 / 021-67121386
Fax : 021-6712-1385
E-mail : Sales-CN@TCIchemicals.com

Tokyo Chemical Industry (India) Pvt. Ltd.
Tel : 1800 425 7889 / 044-2262 0909
E-mail : Sales-IN@TCIchemicals.com

TOKYO CHEMICAL INDUSTRY CO., LTD.
Tel : +81 (0)3-5640-8878
E-mail : globalbusiness@TCIchemicals.com