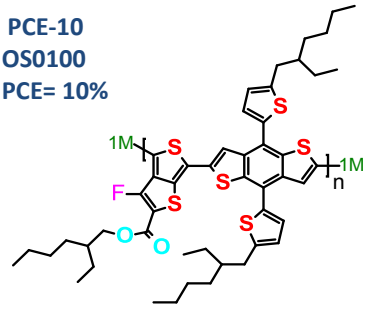
1-MATERIAL

Organic Nano Electronic

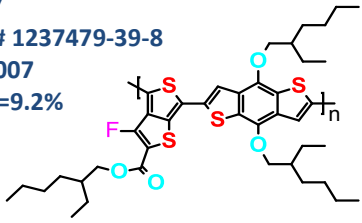
1= ONE

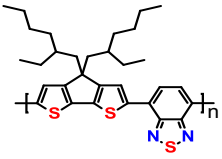
Solar Polymers

PCE-10
OS0100
PCE= 10%

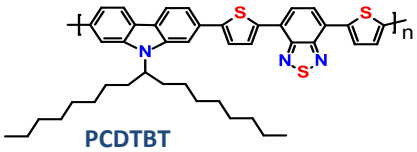


PTB7
CAS# 1237479-39-8
OS0007
PCE =9.2%

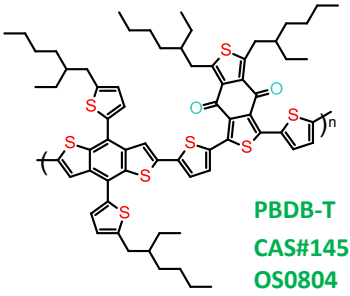




PCPDTBT
CAS#920515-34-0
OS0340

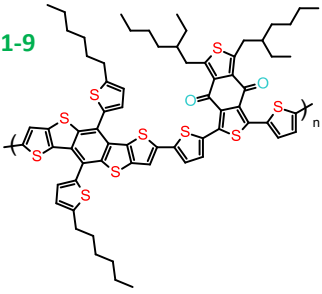


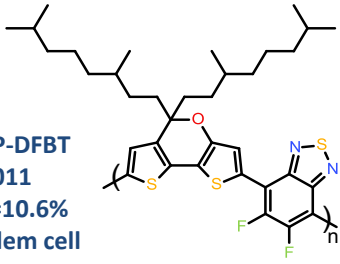
PCDTBT
CAS#958261-50-2
OS0502



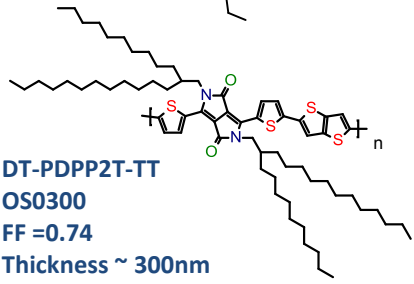
PBDB-T
CAS#145929-80-4
OS0804

PDBT-T1
CAS#1701403-91-9
OS0919



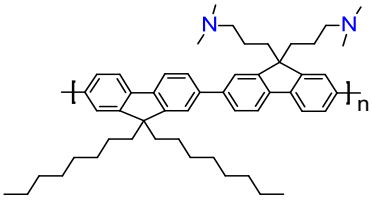


PDTP-DFBT
OS0011
PCE=10.6%
Tandem cell

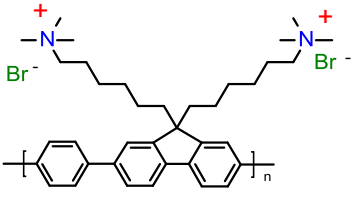


DT-PDPP2T-TT
OS0300
FF =0.74
Thickness ~ 300nm

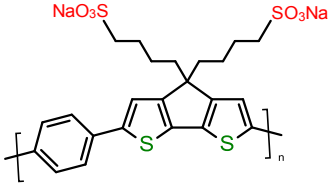
Polymeric electrolytes for interface



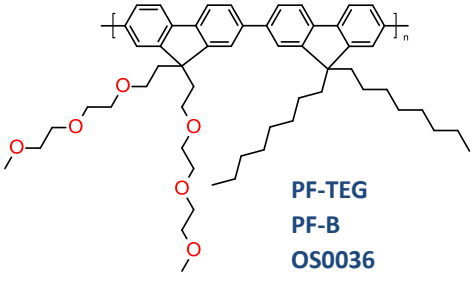
PFN
CAS#673474-74-3
OS0743



FQ-Br
OS0364

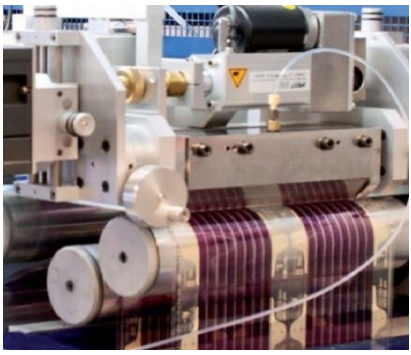


PCPDTPhSO$_3$Na
WS0400

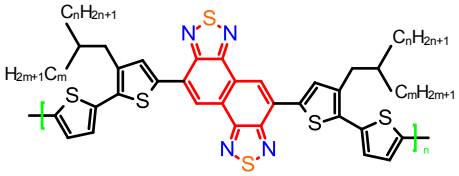


PF-TEG
PF-B
OS0036

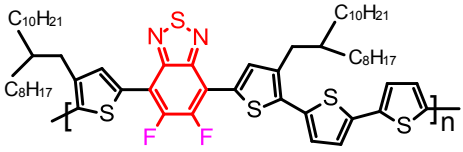
R2R Solar Polymers



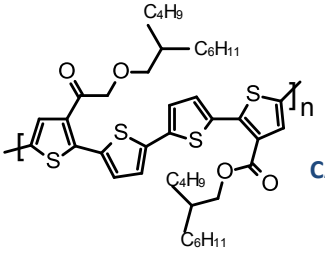
Thickness	400±300 nm	Tolerant
Stability	> 150 °C	Thermo-stable
Acceptor	$PC_{60}BM$	Comparable
PCE (%)	9 ± 2	Reproducible



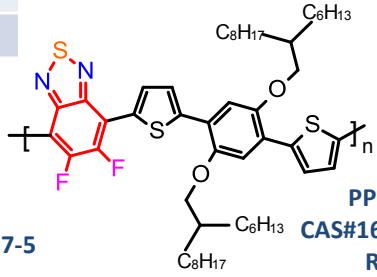
PNTz4T	PNT4T-2OD
n=10, m=12	n=8, m=10
CAS#1357999-90-6	CAS#1800244-09-0
OS0906	OS0090



PCE-11
PffBT4T-2OD
R2R002

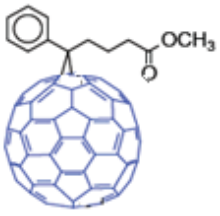


PDCBT
CAS#1609536-17-5
R2R004

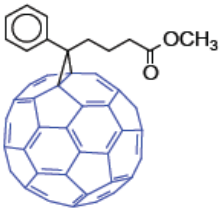


PPDT2FBT
CAS#1620673-07-5
R2R003

Acceptors

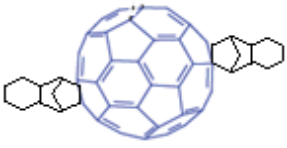


$PC_{70}BM$
CAS#609771-63-3
OS0633

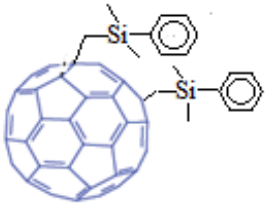


$PC_{60}BM$
CAS#160848-21-5
OS0226

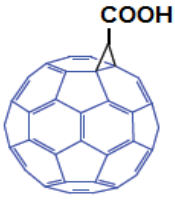
$PC_{60}BPF$
1010806-14-0
OS0140



ICBA
CAS#120461-57-1
OS0571

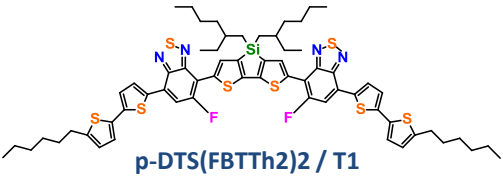


SIMEF
CAS#169156-40-5
OS0405

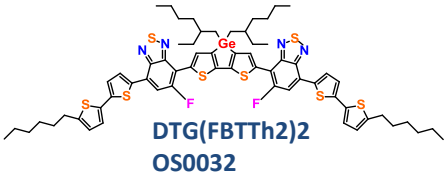


C_{60}-AC
CAS#155116-19-1
OS0191

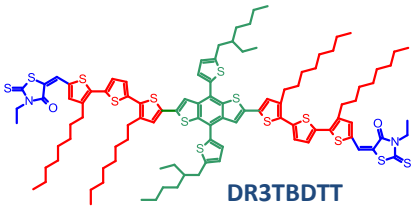
● Small Molecular OPV Donor Materials



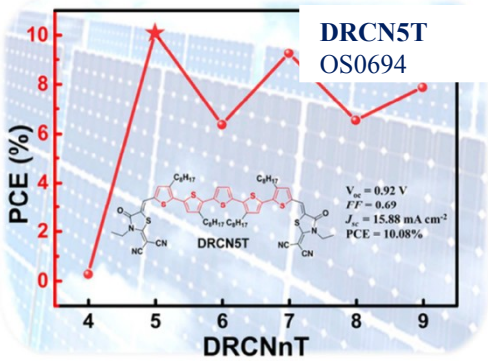
p-DTS(FBTTh2)2 / T1
OS0010



DTG(FBTTh2)2
OS0032

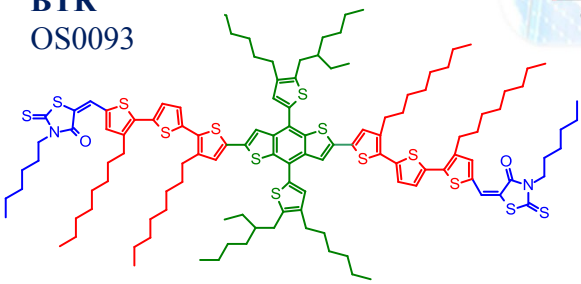


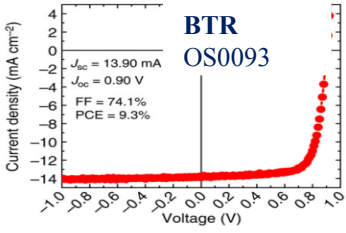
DR3TBDTT
CAS#1439861-04-7
OS0047



DRCN5T
OS0694

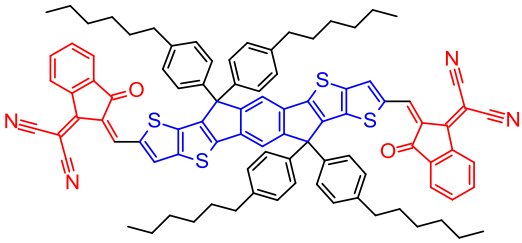
BTR
OS0093



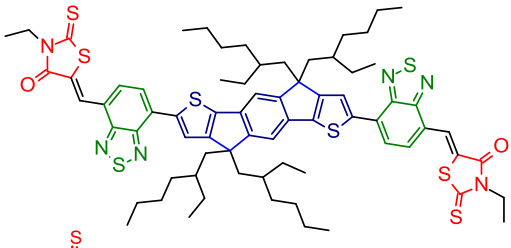


BTR
OS0093

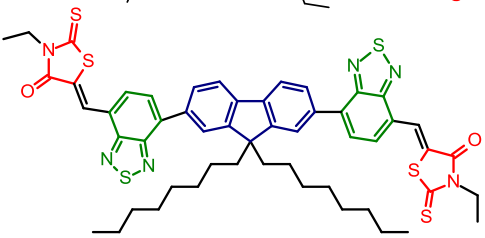
● Small Molecular Non-Fullerene Acceptors(NFA)



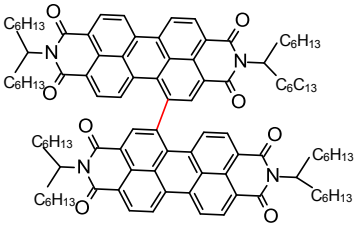
ITIC/NFA005
CAS#1664293-06-4
HOMO=-5.5eV, LUMO=-3.8eV
DOI: 10.1002/adma.201600281
PBDB-T/ITIC, PCE=11.21%



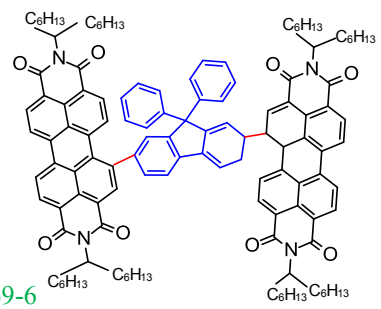
IDTBR/NFA004
EA=3.88eV, IP=5.45eV
Acc.Chem.Res., 2015, **48**, 2803
P3HT/IDTBR, PCE=6.38%



FBR/NFA003
CAS#1644381-95-2
HOMO=-5.7eV, LUMO=-3.6eV
JACS, 2014, **137**, 898
P3HT/FBR, PCE=4.11%

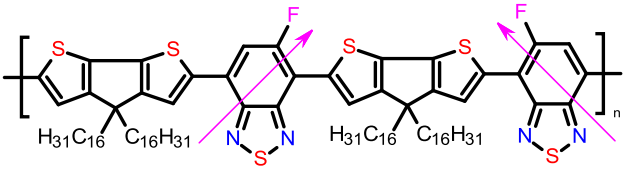


NFA001/Di-PDI
CAS#609131-78-3

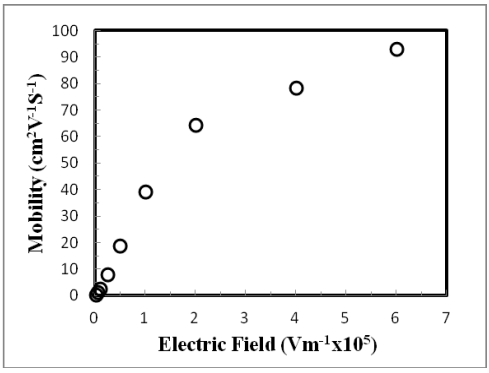


NFA002
SF-PDI
1643842-69-6

OTFT Materials

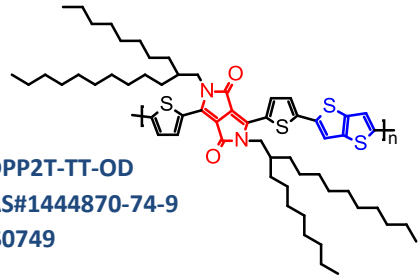


PFT-100
PCDTFBT
OS0474-NEW

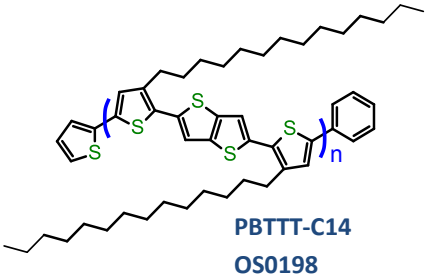


Semiconducting polymer with mobility approaching 100 cm^2/V-s

The new released asymmetric regio-regular conjugated polymer(PFT-100) is soluble in common organic solvents to form high oriented thin films by solution-processing techniques. The OTFT device fabricated from this polymer is thermal stable up to 400 °C and exhibits a stressed charge mobility which is approaching to **100 cm^2 $V^{-1}s^{-1}$**.

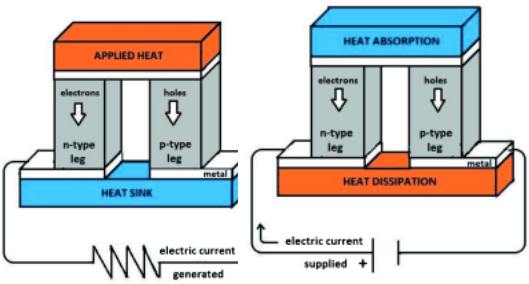


PDPP2T-TT-OD
CAS#1444870-74-9
OS0749

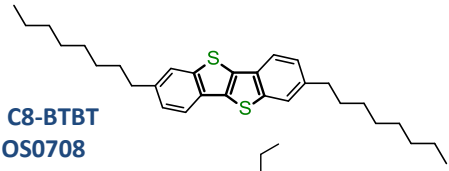


PBTTT-C14
OS0198

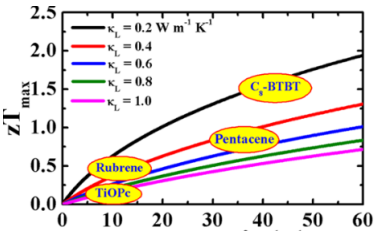
OTE Materials

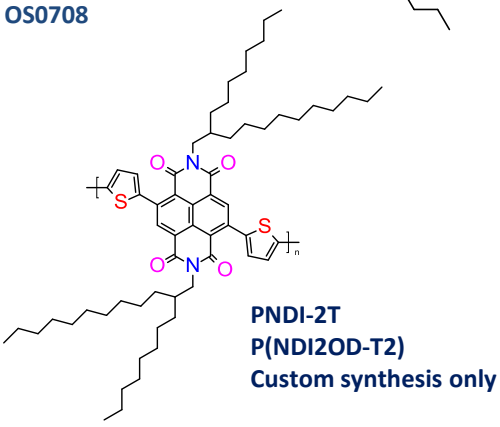


From waste heat to power source, thermoelectric materials can turn a temperature difference into electricity by exploiting the flow of electrons from a warmer area to a cooler one. Organic thermoelectric (OTE) materials are of flexibility, cost effectiveness, and low thermal conductivity. 1-Material Inc is looking for your suggestions to further tune these OTE materials exampled below confidentially and reliably.

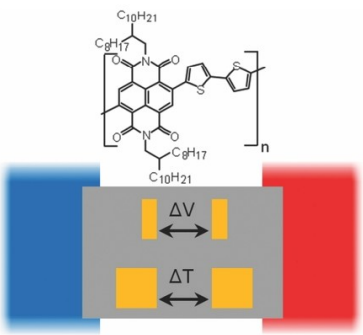


C8-BTBT
OS0708





PNDI-2T
P(NDI2OD-T2)
Custom synthesis only



1 = ONE (Organic Nano Electronic) Materials
for these who understand quality

Reproducibility Matters, Organic Nano Electronic(ONE=1) Materials

Along with the growing interest in organic nano electronics, comes an increase in the inconsistencies associated with the performance of a given organic electronic material. Differences and non-reproducibility are apparent from one report to another, from one organization to another, and from one test to another even in the same laboratory and tested by the same scientist or engineer. Without a standard material, the reported data lose their significance for comparison and validation. Without a standard material, the industry loses its potential for scale-up and commercialization

1-Material Inc sees the need and the necessity to standardize Organic Nano Electronic (ONE=1) materials for organic thin film applications, and also understands the challenges to do so. With its accumulated experience in synthesis, purification, formulation and characterization, the company is extending its focus to processing and validation. Rather than to continuously pursue innovative structures, the company has dedicated itself to standardize these classic and most common studied materials, and to make them reliable and reproducible.

1-Material Inc is making a reliable and standard material, not just a pure chemical. A chemical is not a material unless its function is reproducibly performed against elapsed time. Our ONE materials have been constantly delivering world-record performance (PCE of polymer solar cells) in open scientific publications: 8.37%(2011) in Advance Materials, 9.24%(2012) in Nature Photonics, 10.61%(2015) in Nature Photonics. To support your research in OPV, OLED, OTFT and printing electronics in general, we are custom making ONE materials to your needs, confidentially and reproducibly.

Disclaimer:

1-Material is dedicated to provide the material according to the customer's needs. A few of the materials being promoted may be solely offered to certain customers for their research and development projects on a custom synthesis or a contract research basis. For the conditions and terms of our offer and service, please consult the disclaimer in our web: **www.1-material.com**

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