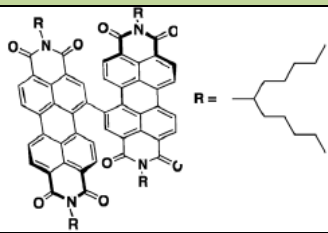
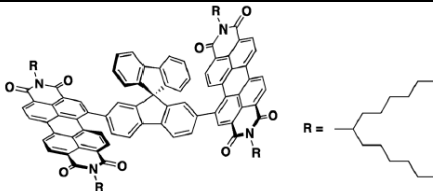
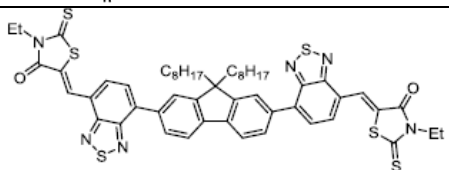
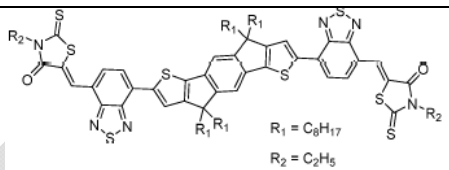
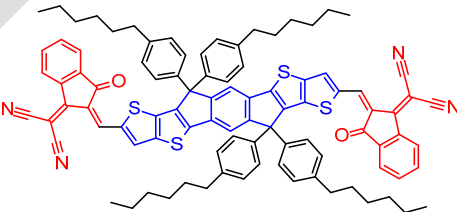
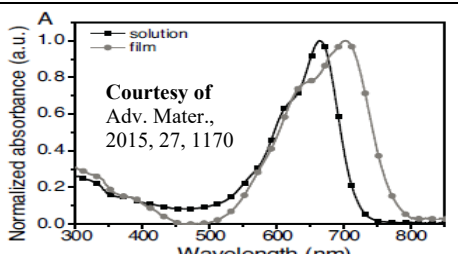


PCE ~11% has been reported for a Small Molecule Non-Fullerene Acceptor (SMNFA) to overcome high cost and poor stability of fullerene-based organic photovoltaics(OPV). Considering (1) efficient charge transfer, (2) good morphology (3) easy synthesis and purification, (4) proper solubility for green solvents, and (5) right optical adsorptivity, the following SMNFAs are selected from open publications for your suggestions and validations only.

Courtesy of general references: (1) *Acc.Chem. Res.*, **2015**, *48*;2803 (2) *J.RSC, Adv*, 2015 93002 and (3) *J.Mater.Chem, A*, 2015, *3*, 16393, (4) *Adv. Mater.* 2015 27 1170

Listing No.	Common Name CAS No.	Structure	Reference and Remarks
NFA001 OS0783	di-PDI CAS#1609131-78-3		<i>Chem. Communications</i> , 2014 , <i>50</i> (8), 1024 EA(eV) = 4.04, IP(eV)=6.13 HOMO(eV) = -6.1; LUMO(eV)=-4.0 Active layer: PCE-10/di-PDI PCE = 5.9% V _{oc} (V)=0.80; J _{sc} (mA/cm ²)=12.0; FF = 0.59
NFA002 OS0696	SF-PDI CAS# 1643842-69-6		<i>Energy Environ.Sci.</i> , 2015 , <i>8</i> , 520 EA(eV) = 3.83, IP(eV)=5.90 HOMO(eV) = -5.9; LUMO(eV)=-3.8 Active layer: PCE-11/SF-PDI PCE = 6.3% V _{oc} (V)=0.98; J _{sc} (mA/cm ²)=10.7; FF = 0.57
NFA003 OS0952	FBR CAS#1644381-95-2		<i>JACS.</i> , 2014 , <i>137</i> , 898 EA(eV) = 3.57, IP(eV)=5.70 HOMO(eV) = -5.7; LUMO(eV)=-3.6 Active layer: P3HT/FBR PCE = 4.11% V _{oc} (V)=0.82; J _{sc} (mA/cm ²)=7.95; FF = 0.63
NFA004	IDTBR		<i>Acc.Chem. Res.</i> , 2015 , <i>48</i> , 2803 EA(eV) = 3.88, IP(eV)=5.45 Active layer: P3HT/IDRBR PCE = 6.38% V _{oc} (V)=0.73; J _{sc} (mA/cm ²)=14.1; FF = 0.62
NFA005 OS0064	ITIC CAS#1664293-06-4		 Normalized absorbance (a.u.) vs Wavelength (nm) Courtesy of <i>Adv. Mater.</i> , 2015, 27, 1170

Other non-fullerene acceptors may also be interested, please contact info@1-material.com for more information.