Supporting information

Triindole-Cored Star-Shaped Molecules for Organic Solar Cells

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Figure S1. The transfer characteristic curves of spin-coated films of SM-1 (a) and SM-2 (b) on OTS-treated Si/SiO₂ substrates.



Figure S2. The output and transfer characteristic curves of the blend films of SM-1and $PC_{71}BM$ on OTS-treated Si/SiO₂ substrates. $\mu = 1.13 \times 10^{-5} \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$



Figure S3. The output and transfer characteristic curves of the blend films of SM-1 and PC₇₁BM on OTS-treated Si/SiO₂ substrates. μ = 2.05 × 10⁻⁴ cm² V⁻¹ s⁻¹



Figure S4. DSC traces of SM-1 and SM-2 measured at a heating rate 20 $^{\circ}$ C/min and a N₂ flow of 50 mL/min.

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Figure S5. The MAILD-TOF spectra of SM1



Figure S6. The high resolution MS of SM1



Figure S6. ¹H NMR spectrum of **SM-1** (measured in 1,2-dichlorobenzene- d_4 at 80 °C) and the assignment of the peaks.



Figure S7. ¹H NMR spectrum of **SM-1** (measured in 1,2-dichlorobenzene-d₄ at 80 $^{\circ}$ C).



Figure S8. ¹³C NMR spectrum of **SM-1** (measured in 1,2-dichlorobenzene-d₄ at 80 $^{\circ}$ C).