## **Supporting Information** a) 0.000 b) 0.000 -0.002 -0.002 Drain current (A) -0.004 Drain current -0.004 -0.006 -0.006 -0.008 -0.008 οv -0.010 -0.010 -20 -15 -5 -30 -25 -20 -15 -10 -35 -5 Drain voltage (V) Drain voltage (V) C)0.0000 -0.0002 -0.0004 -0.0006 -0.0008 -0.0010 -0.0012 -0.0014 inkjet printing -0.0016 -20 -15 -30 -25 Drain voltage (V)

**Figure S1**. Output characteristics of TFTs based on rr-P3DDT sorted arc discharge SWCNTs by (a) dip-coating methods, (b) drop-coating and (c) inkjet printing methods.

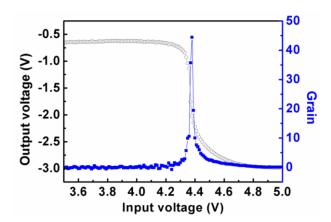
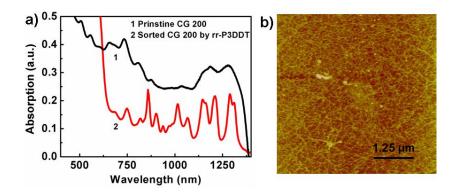
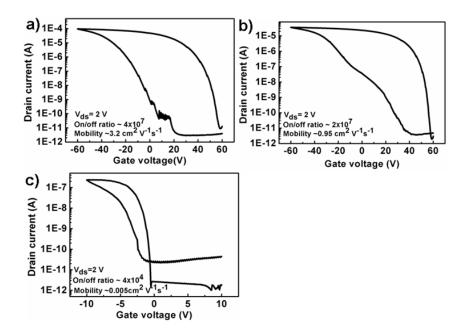


Figure S2. Input-output and gain characteristics of an inverter at  $V_{dd}$ = -3 V. The value of gain is 45.



**Figure S**3. (a) Absorption spectra of pristine CG 200 SWCNTs in 1% SDS aqueous solutoin and sorted sc-SWCNTs from CG 200 by rr-P3DDT in toluene, and (b) AFM image of sorted sc-SWCNTs from CG 200 in the device channel.



**Figure S**4. Transfer characteristic of TFTs based on sorted sc-SWCNTs from CG 200 on pre-patterned gold on SiO<sub>2</sub>/Si substrates via (a) dip coating, (b) drop casting methods and (c) on printed silver electrode arrays on glass substrates by dip coating, respectively.