

Supporting Information:

Scalable and selective dispersion of semiconducting arc-discharged carbon nanotubes by dithiafulvalene/thiophene copolymers for thin film transistors

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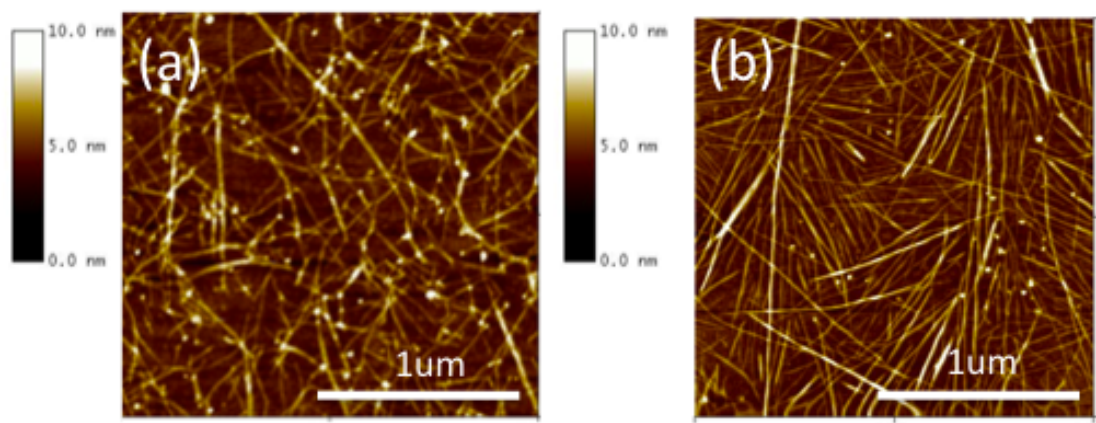


Figure S1. AFM images of the morphology of (a) small-diameter (0.7nm~1.1nm) Hipco SWNTs and large-diameter(~1.4nm) Arc-discharge SWNTs.

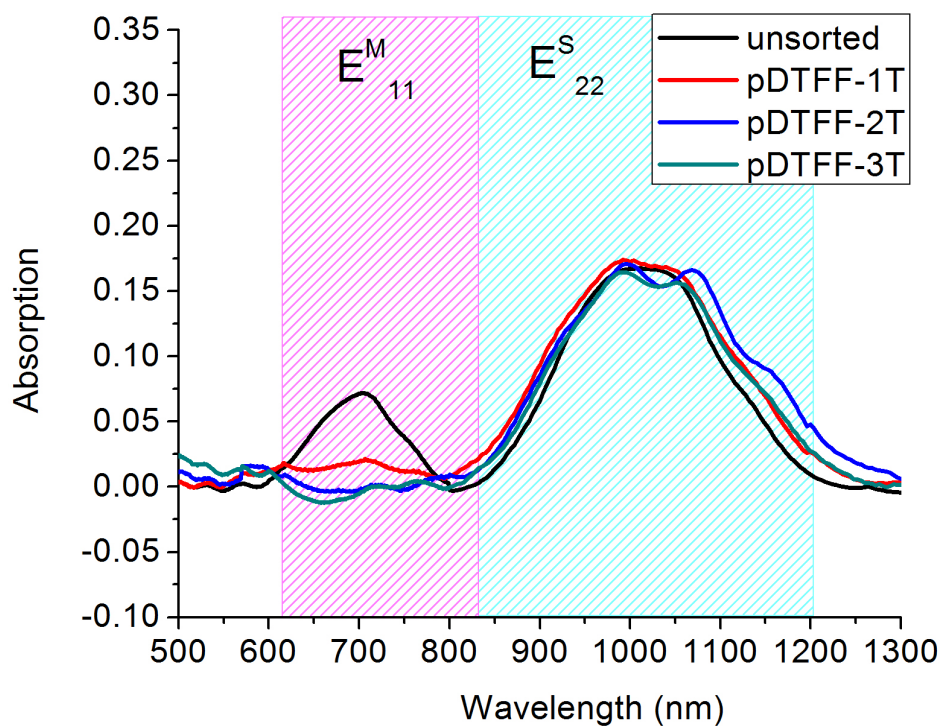


Figure S2. Absorption spectrums of the SWNTs dispersed by pDTFF-*m*T on films after polymer burning process.

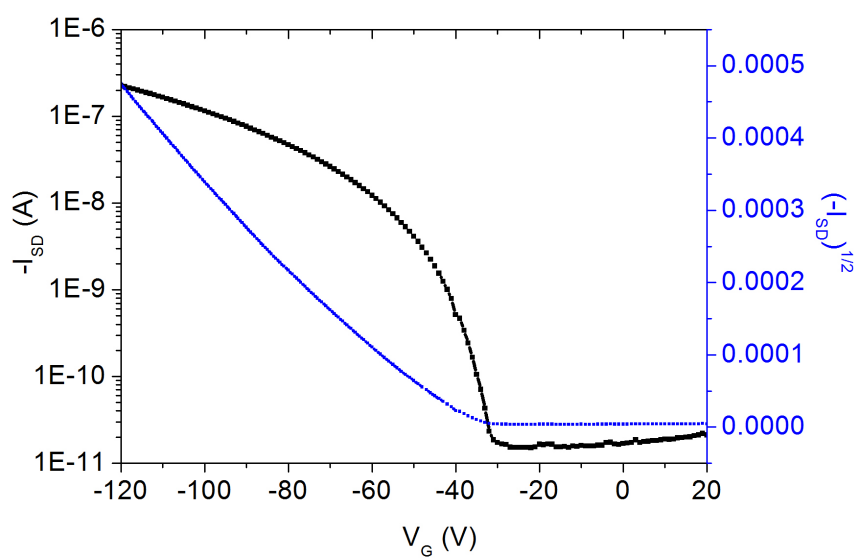


Figure S3. Transfer curve of a pDTFF-3T device (without SWNTs) in the saturation regime ($I_{SD} = -120V$).

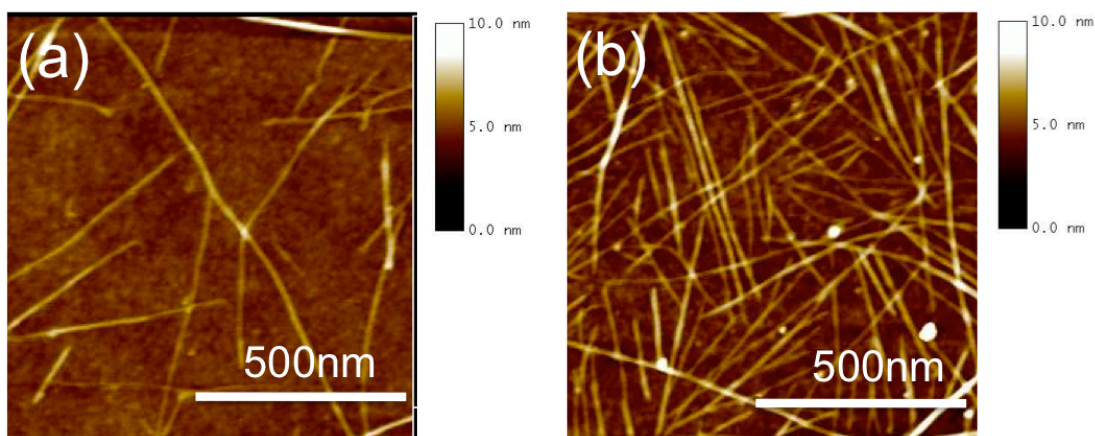


Figure S4. AFM images of the device made from large-diameter SWNTs with a density of (a) ~ 15 SWNTs/ μm^2 (b) ~ 50 SWNTs/ μm^2 dispersed by pDTFF-3T in toluene.

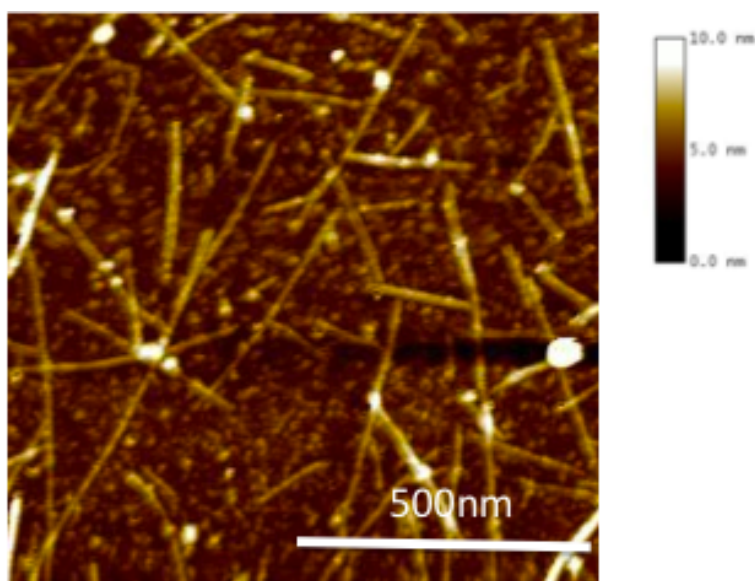


Figure S5. AFM images of the device made from large-diameter SWNTs with a density of ~ 30 SWNTs/ μm^2 dispersed by pDTFF-3T in chloroform.

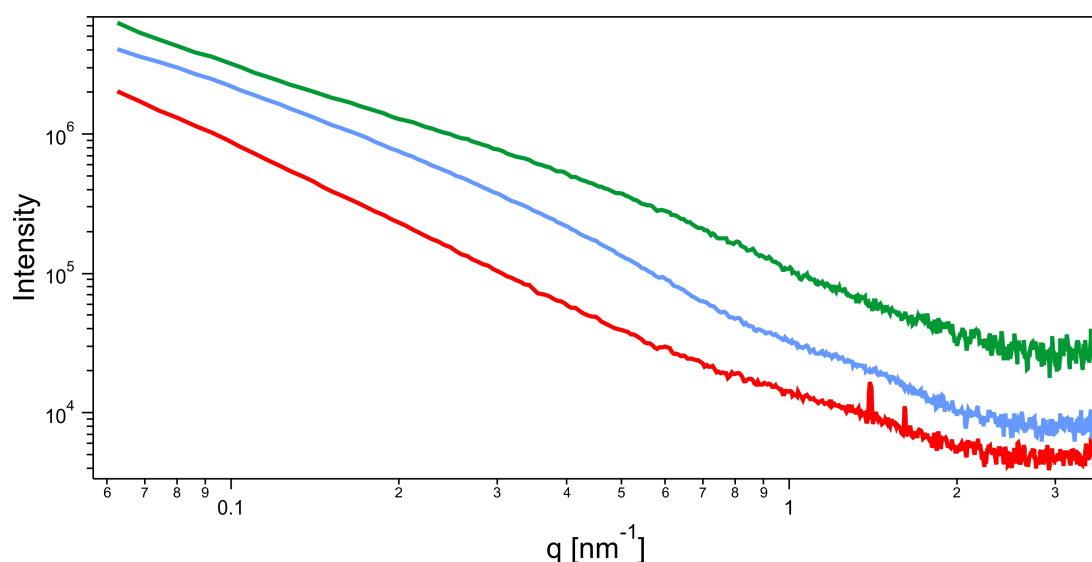


Figure S6. Small angle X-ray scattering (SAXS) profiles of pDTFF-1T (red), pDTFF-2T (blue) and pDTFF-3T (green).

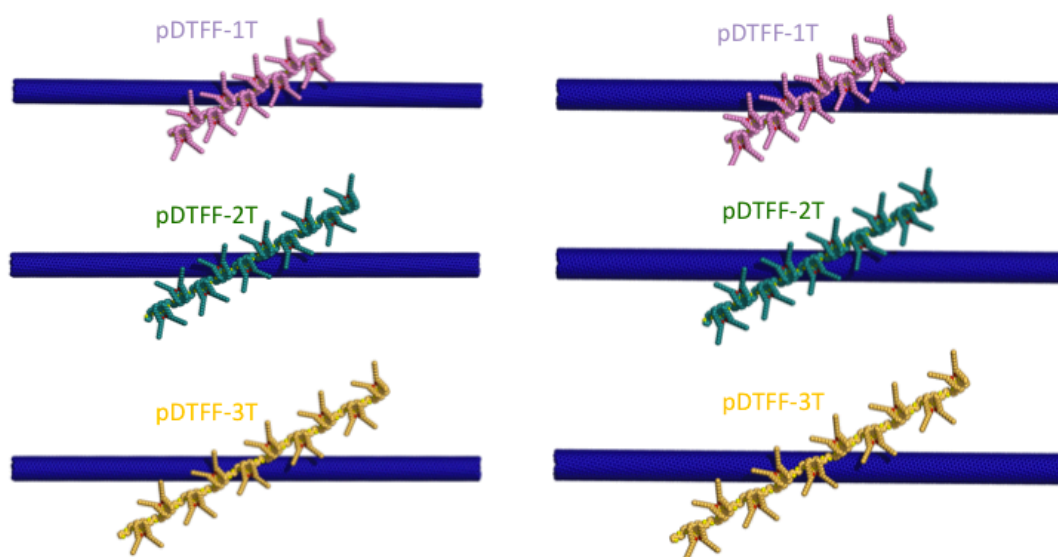


Figure S7. Starting structure of the MD simulation for (a) (11,8) m-SWNT and (b) (16,6) sc-SWNT.

	Mn (g/mol)	PDI
pDTFF-1T	3.2×10^4	1.2
pDTFF-2T	8.4×10^4	1.9
pDTFF-3T	5.0×10^4	2.1

Table S1. Molecular weight and polydispersity of polymers measured by Gel Permeation Chromatography (GPC).