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Infrared-Transparent Polymer Solar Cells

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Supplementary information

Table S1. *J-V* characteristics of solar cells with metal or CNT film electrodes.

Table S2. *J-V* characteristics of CNT cell, CuPc/C_{60} cell and Si standard cell as well as utilization of transmitted light from CNT cell.

Figure S1. Fabrication of the CNT transparent electrode on the P3HT: PCBM layer.

Figure S2. Energy diagrams of the top and bottom cell in our tandem structure.

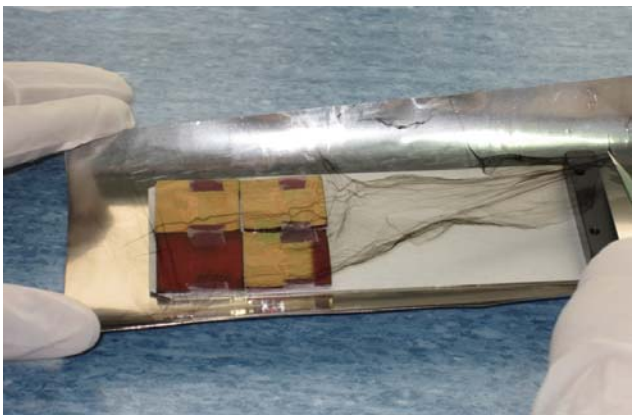
Figure S3. SEM image of as-synthesized CdSe nanobelts on a silicon oxide substrate by chemical vapor deposition and used for making photo-sensors.

Table S1. *J-V* characteristics of solar cells with CNT film or metal (control sample) electrodes.

	CNT Cell		Control Cell
	Front side	Backside	
V_{oc} (V)	0.57	0.54	0.52
J_{sc} (mA/cm^2)	10.84	7.31	11.48
FF (%)	40.2	37.5	41.0
PCE (%)	2.48	1.48	2.45

Table S2. *J-V* characteristics of CNT cell, CuPc/C_{60} cell and Si standard cell as well as utilization of transmitted light from CNT cell.

	V_{oc} (V)	J_{sc} (mA/cm^2)	FF (%)	PCE (%)
CNT cell (top cell)	0.54	8.10	46.3	2.03
CuPc cell (uncovered)	0.47	4.57	55.5	1.19
CuPc (covered by the CNT cell)	0.36	1.81	52.9	0.34
CNT and CuPc cell in Parallel	0.44	10.53	50.3	2.33
CNT and CuPc cell in Series	0.92	1.65	65.5	1.00
Si cell	0.51	33.85	65.2	11.26
Si cell (covered by the CNT cell)	0.47	14.95	59.9	4.21



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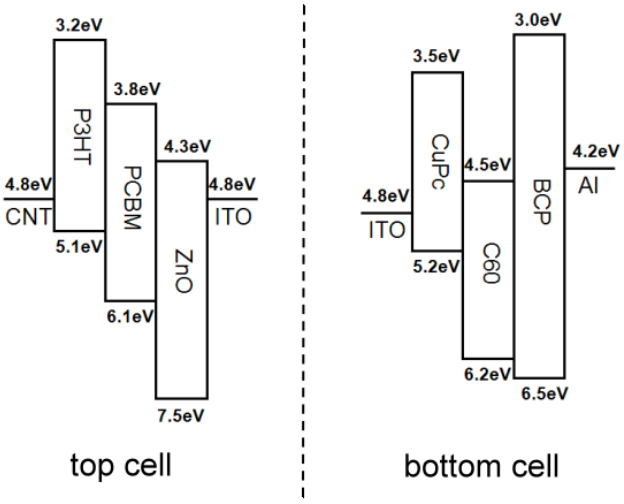

Figure S2. Energy diagrams of the top and bottom cell in our tandem structure.

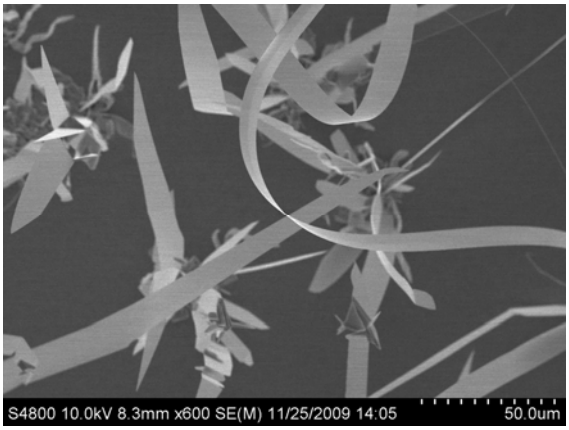

Figure S3. SEM image of as-synthesized CdSe nanobelts on a silicon oxide substrate by chemical vapor deposition and used for making photo-sensors.