ADVANCED MATERIALS

Supporting Information

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Supporting Information for

Optoelectronic switch and memory devices based on polymer functionalized carbon nanotube transistors.

by

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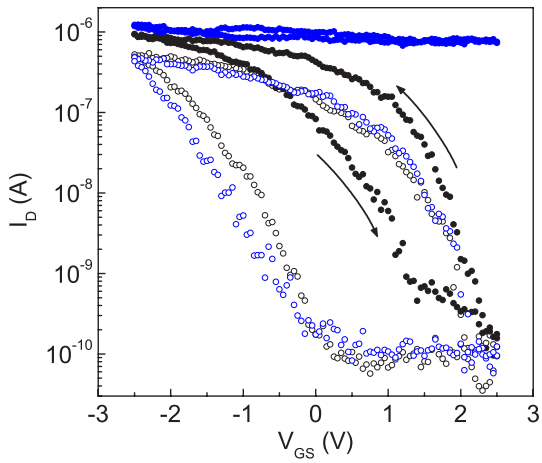

Figure S1: Hysteresis effect on the transfer characteristics of the OG-CNTFET. Figure similar to figure 1b but including both sweep directions. The optical gating effect dominates over the hysteresis. The sweeping time is 2 s/V.

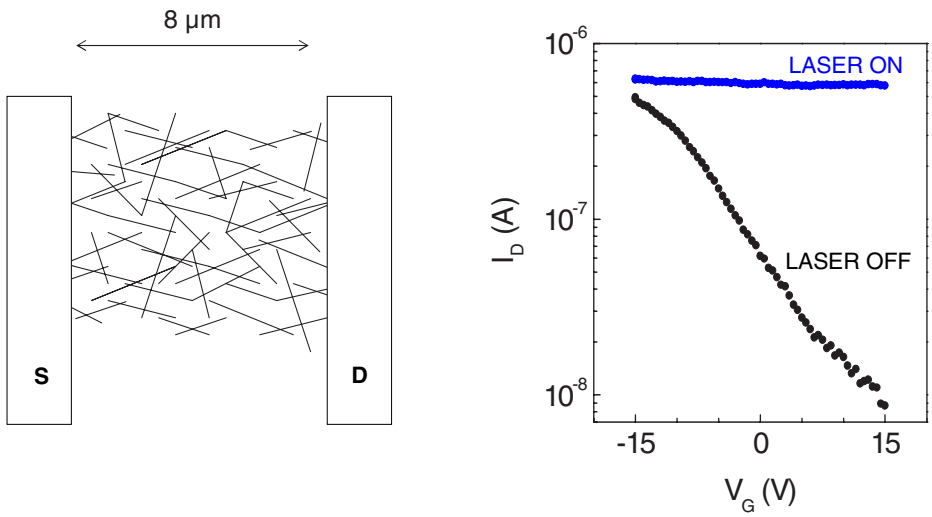

Figure S2: Transfer characteristics of a carbon nanotube network deposited on an APTS layer and coated by a ∼5 nm thick P3OT film. The network is 5x8 μm^2 and the carbon nanotube lengths are in the 500 nm to 1 μm range.

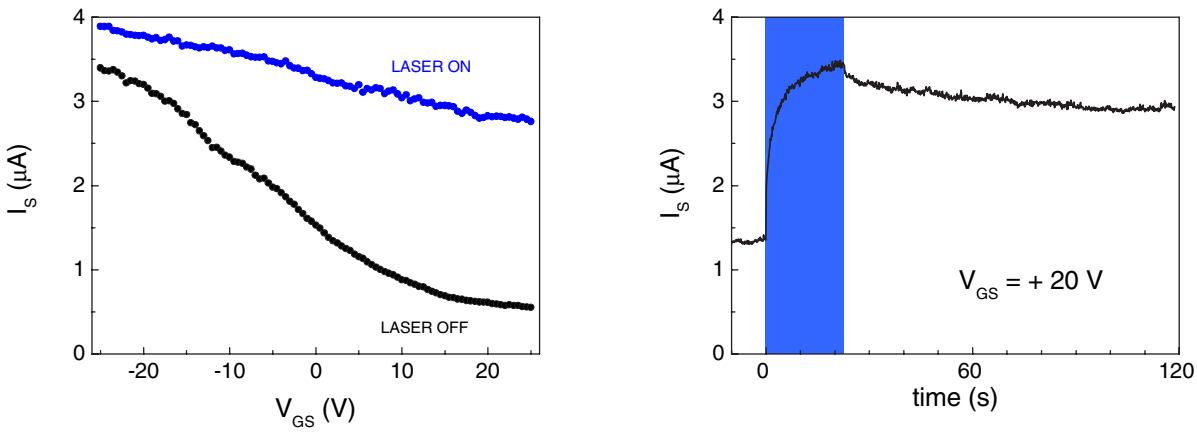

Figure S3: Transfer characteristics and dynamics of an OG-CNTFET made by random deposition of carbon nanotubes on a $Si0_2$ surface (no APTS) and coated by a ∼5 nm thick P3OT film. The device contains several nanotubes including metallic ones. t_{ox} = 150 nm and V_{DS} = -400 mV.