Electronic Supplementary Material (ESI) for Nanoscale. This journal is © The Royal Society of Chemistry 2014

Supporting information for

## Transport Behaviors of Photo-Carriers across Aligned Carbon Nanotubes and Silicon Interface

Ru Li, a,b Hongfang Li,b Jingyun Zou,b Xiaohua Zhang,b and Qingwen Lib,\*

1. The photograph of CNT sheet directly drawn from the spinnable CNT array.

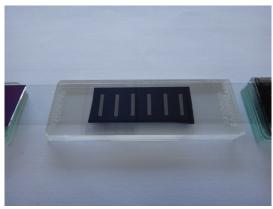


Figure S1: The photograph of CNT sheet drawn from spinnable CNT array and the patterned SiO<sub>2</sub>/Si substrate.

2. SEM images of aligned CNTs on SiO<sub>2</sub>/Si substrate and the conductivity in the parallel and vertical direction.

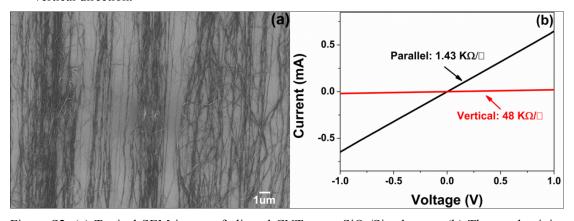


Figure S2: (a) Typical SEM image of aligned CNTs on a  $SiO_2/Si$  substrate. (b) The conductivity of the CNT film in the parallel and vertical direction.

3. TG and TEM of the double-walled carbon nanotube.

<sup>&</sup>lt;sup>a</sup>University of Chinese Academy of Science, Yuquan Road 19, Beijing, 100049, China..

<sup>&</sup>lt;sup>b</sup> Suzhou Institute of Nano-Tech and Nano-Bionics, Ruoshui Road 398, Suzhou, 215123, China. Email: qwli2007@sinano.ac.cn

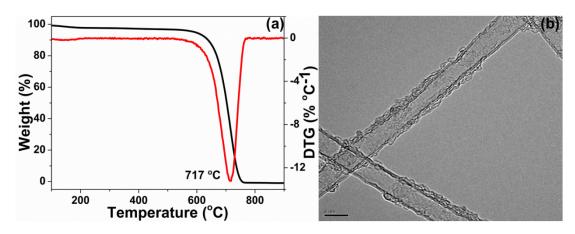


Figure S3: TG (a) analysis of TEM image (b) of the double-walled CNTs in the CNT array.