

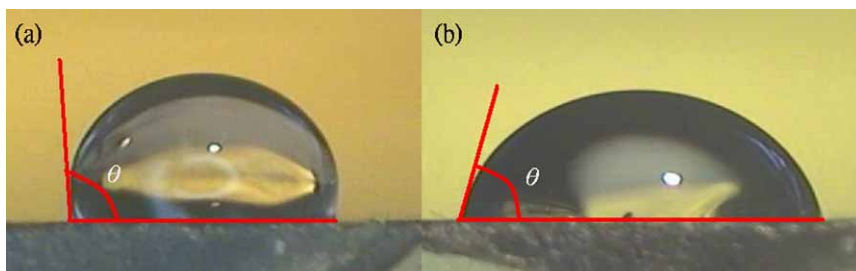
## Supplementary Information

### **A gas-phase hydrophilization of carbon nanotubes by xenon excimer ultraviolet irradiation**

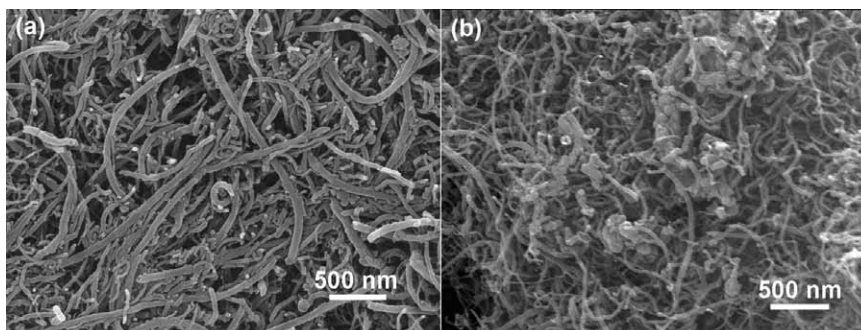
Yi-Fan Li<sup>1</sup>, Chia-I Hung<sup>1</sup>, Ching-Chen Li<sup>1</sup>, Wei Chin<sup>1</sup>, Bee-Yu Wei<sup>2</sup>, Wen-Kuang Hsu<sup>1\*</sup>

*1. Department of Materials Science and Engineering, National Tsing Hua University, HsinChu 30013, Taiwan.*

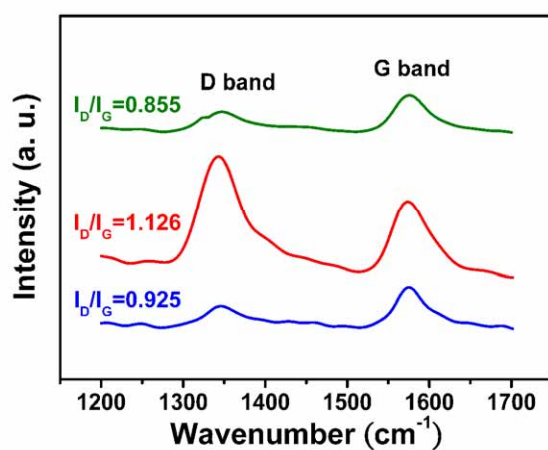
*2. Chemistry and Materials Research Laboratory, Industrial Technology Research Institute, Hsinchu, 31040, Taiwan*



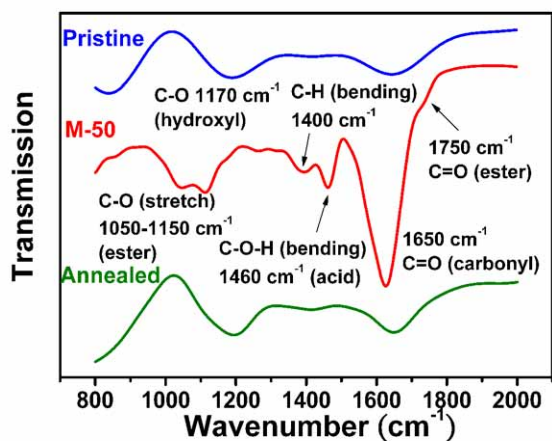
**Fig. S<sub>1</sub>** DW (a) and EG (b) droplet on annealed S-30 film and corresponding CA is 93.3° and 73°.



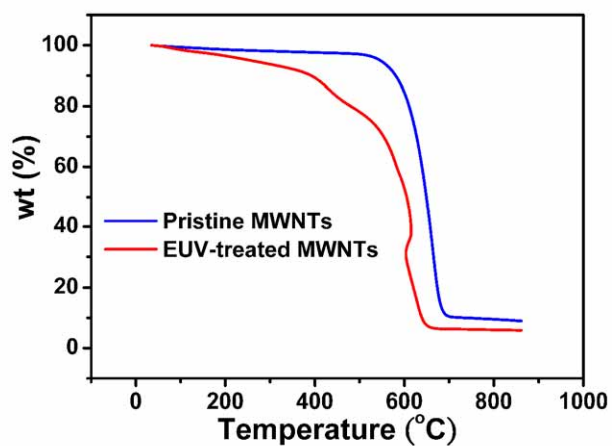
**Fig. S<sub>2</sub>** SEM images of pristine (left) and EUV-treated MWCNTs (right).



**Fig. S<sub>3</sub>** Raman spectra of pristine (blue), EUV-treated MWCNTs (red) and annealed MWCNTs (green).



**Fig. S<sub>4</sub>** FTIR spectra of pristine (blue), EUV-treated MWCNTs (red) and annealed MWCNTs (green).



**Fig. S<sub>5</sub>** TGA profiles of pristine (blue) and EUV-treated MWCNTs (red).