

# Supplementary Material

## Fractal Structures of Single-Walled Carbon Nanotubes in Biologically Relevant Conditions: Role of Chirality vs. Media Conditions

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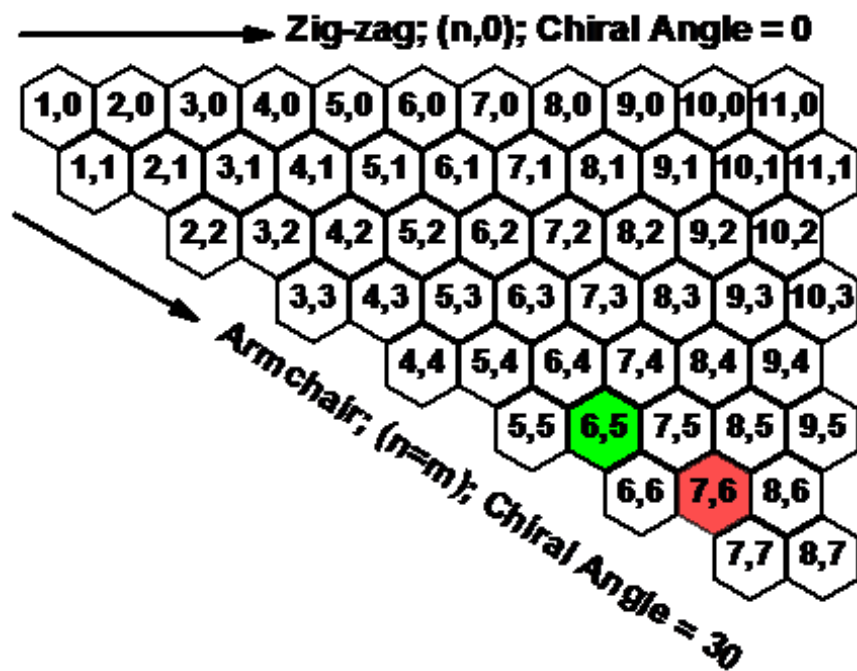
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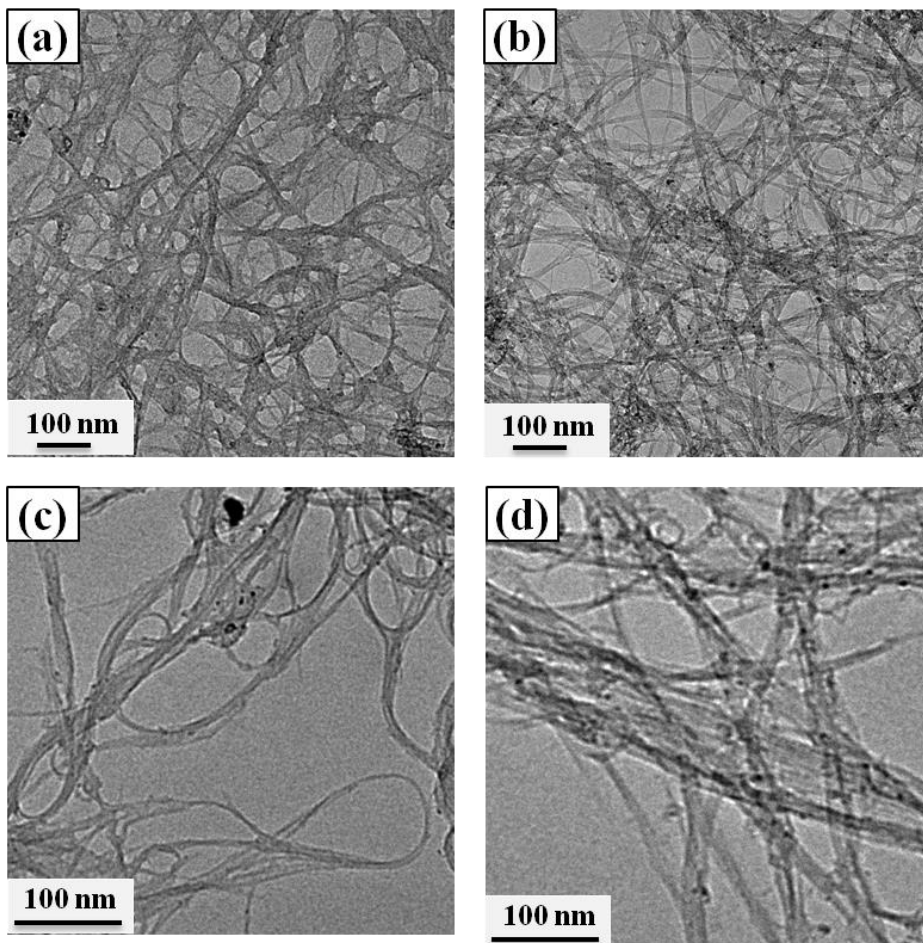
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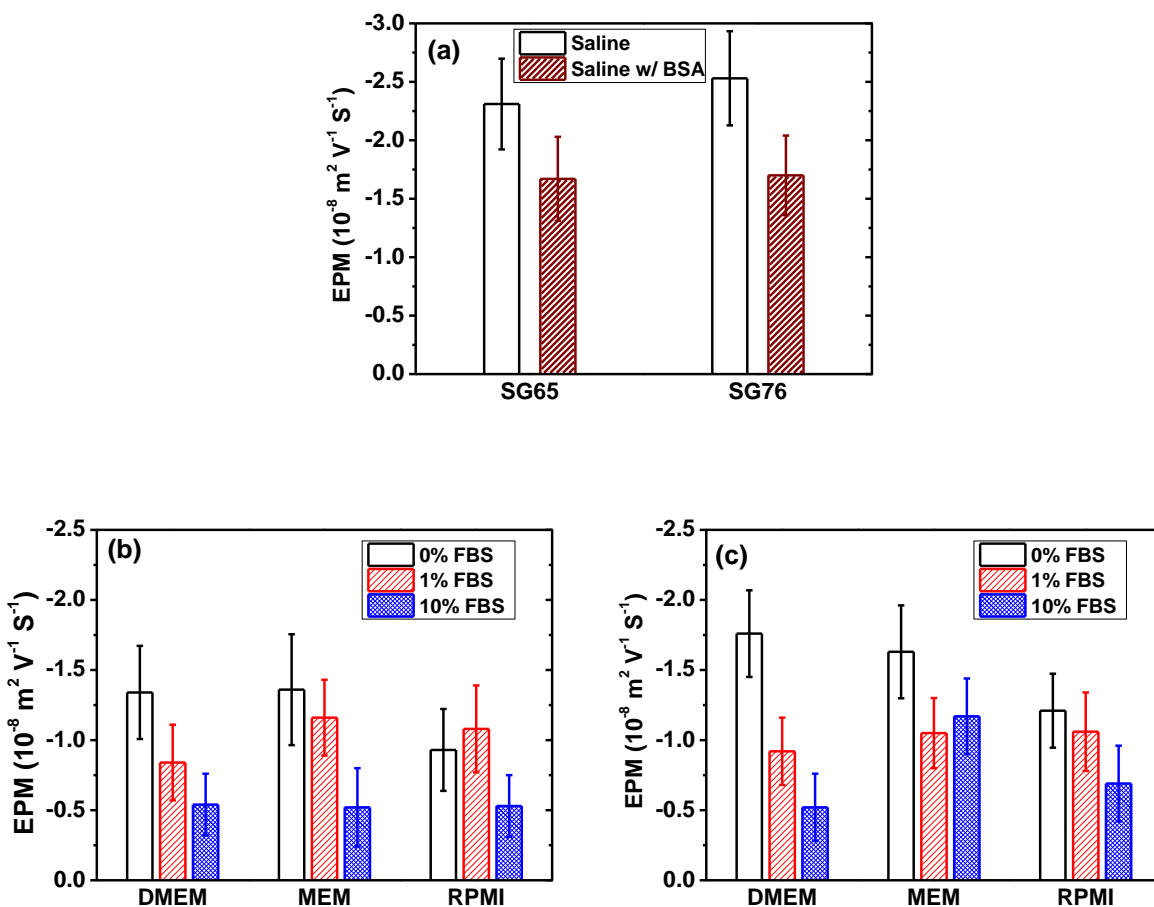
**Figure S1.** Chirality chart of SWNTs. Chiral indices of  $(6, 5)$  and  $(7, 6)$  are shown through color coding, green and transparent red, respectively. The two arrows represent boundaries of atomic arrangements; horizontal arrow is the zig-zag and angular arrow is the armchair extreme for chiral arrangements.

```
data engdata;
input I      theta      lab;
cards;
;
proc mixed covtest;
class lab;
  model I = theta /solution;
  random lab;
run;
```

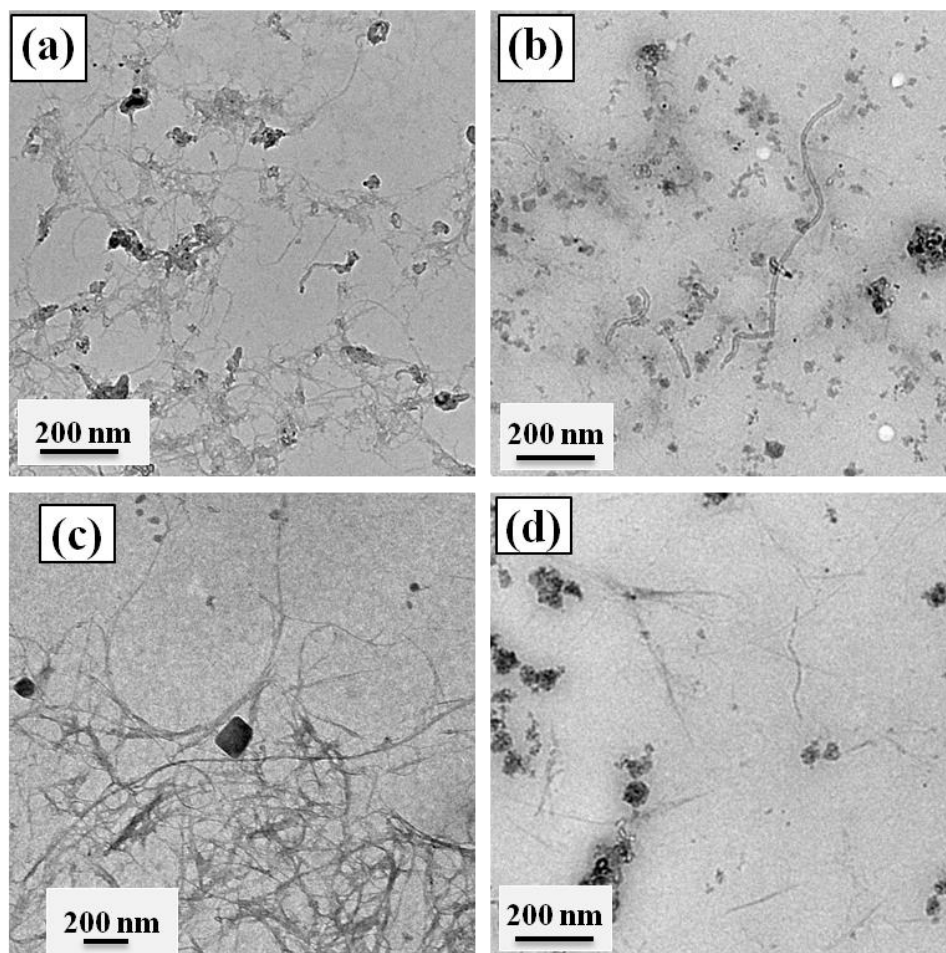
**Figure S2.** The figure above shows the SAS code used to perform the statistical analysis to capture run-specific uncertainty for  $D_f$  determination. This is a standard SAS code of ‘random block-effects’ model.



**Figure S3.** Representative TEM micrographs of (a-b) pristine and (c-d) functionalized SWNTs. Images on the left are of SG65 and on the right are of SG76 samples'.



**Figure S4.** (a) Effect of BSA on electrophoretic mobility (EPM) of SWNTs in control media (i.e. 0.9% Saline solution); Effect of amount of FBS (0, 1, and 10%) on EPM of (b) SG65 and (c) SG76 SWNTs in three different media (i.e., DMEM, MEM, and RPMI). At least three separate experiments were performed for each condition and data presented here are mean of three independent experiments with one standard deviation. Measurements were carried out at a pH of  $\sim 6.5$  and a temperature of  $20^\circ\text{C}$ .



**Figure S5.** TEM micrographs of representative SWNTs: (a) SG65 w/ RPMI ( $D_f = 2.64 \pm 0.05$ ), (b) SG65 w/ RPMI + 10% FBS ( $D_f = 1.72 \pm 0.06$ ), (c) SG76 w/ DMEM ( $D_f = 2.58 \pm 0.13$ ), (d) SG76 w/ DMEM + 10% FBS ( $D_f = 1.89 \pm 0.04$ ).