

ESI

for

**Size Reduction of 3D-polymer-coated Single-walled
Carbon Nanotubes by Ultracentrifugation**

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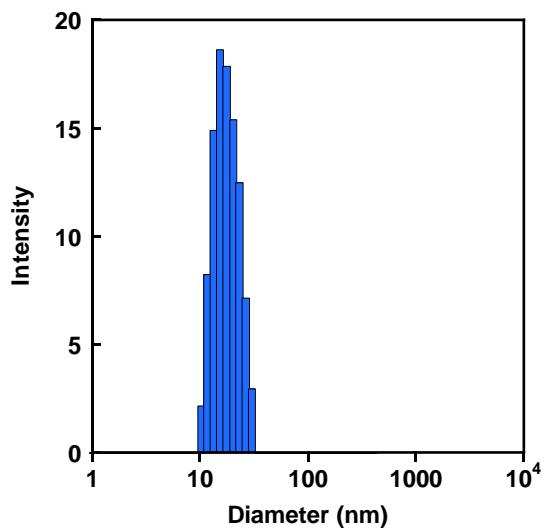


Figure S1. DLS profile of the supernatant after one ultracentrifugation at 600000 g for SWNT/PNIPAM (NIPAM : BIS = 100 : 1).

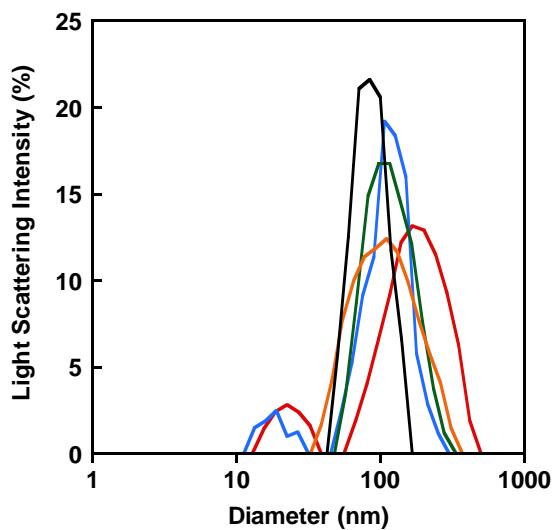


Figure S2. DLS profiles of the SWNT/PNIPAM (NIPAM : BIS = 18 : 1) before (red line) and after one (blue line), two (green line), three (orange line) and four (black line) ultracentrifugations at 600000 g .

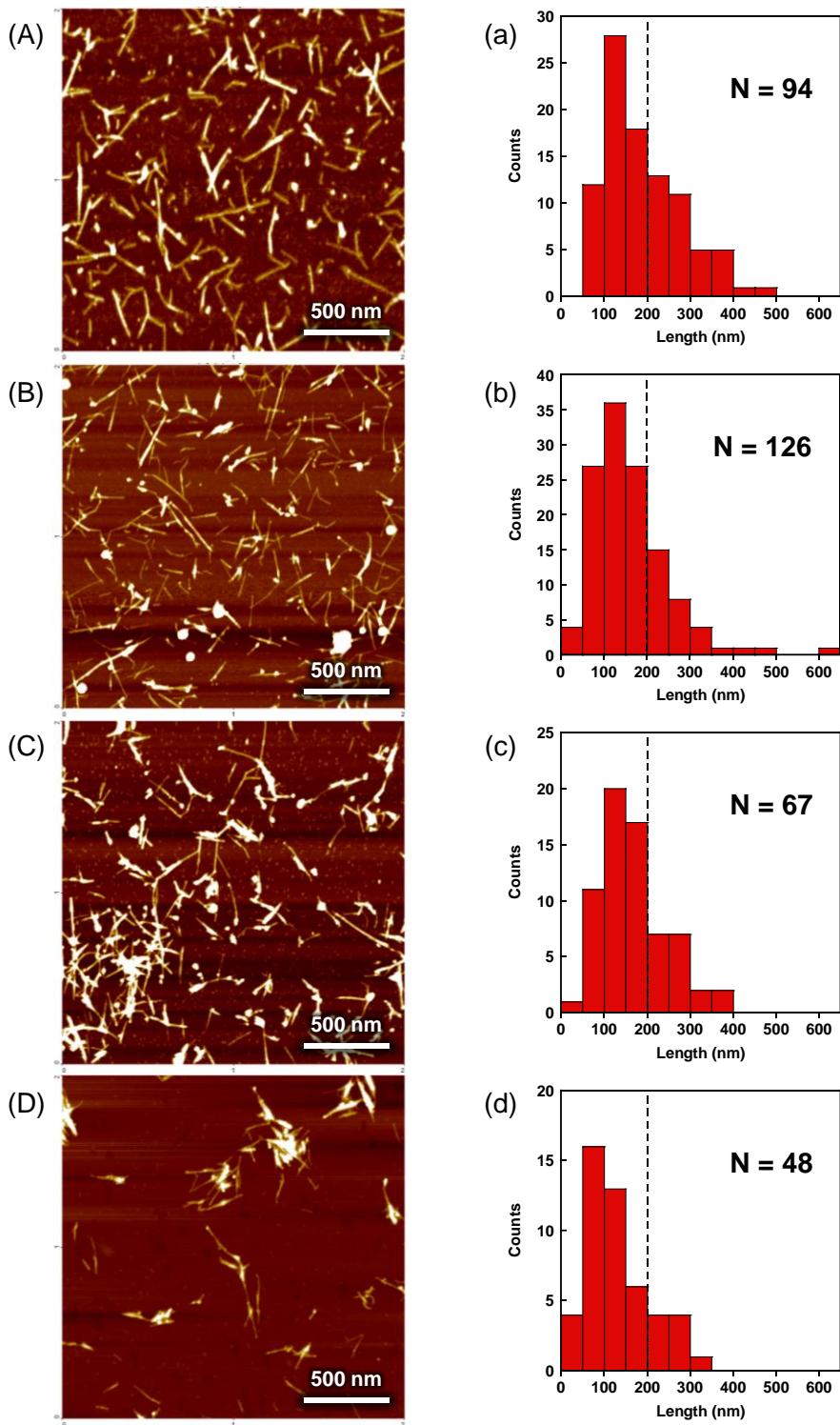


Figure S3. AFM images of the SWNT/PNIPAM (NIPAM : BIS = 18 : 1) after (A) one, (B) two, (C) three and (D) four ultracentrifugations at 600000 g, and their length histograms for (a) image A, (b) image B, (c) image C and (d) image D.

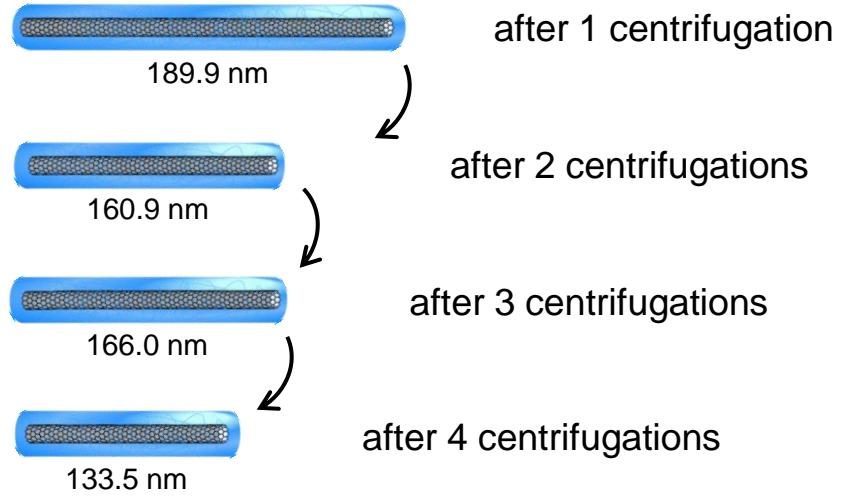


Figure S4. Average length of the SWNT/PNIPAM (NIPAM : BIS = 18 : 1) after specified repeated ultracentrifugations.

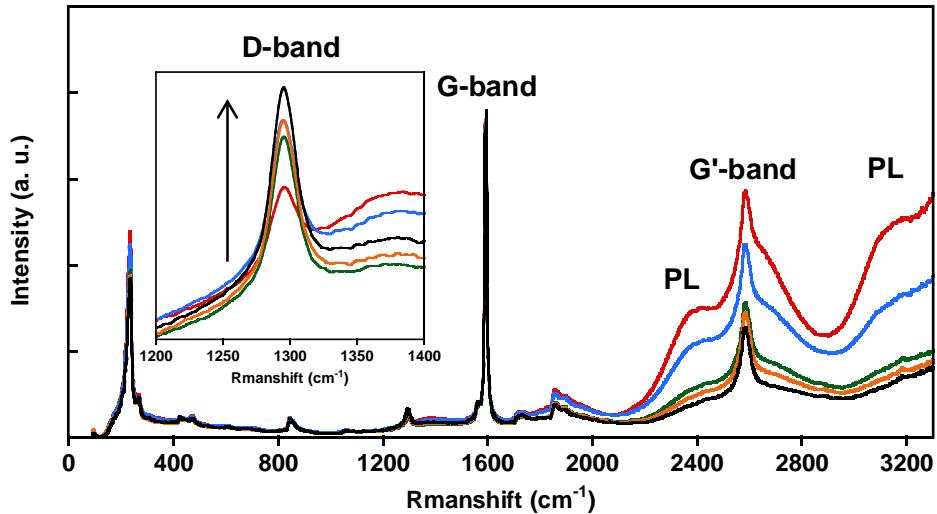


Figure S5. Raman spectra (785-nm excitation) of the SWNT/PNIPAM (NIPAM : BIS = 18 : 1) before (red line) and after one (blue line), two (green line), three (orange line) and four (black line) ultracentrifugations at 600000 g.

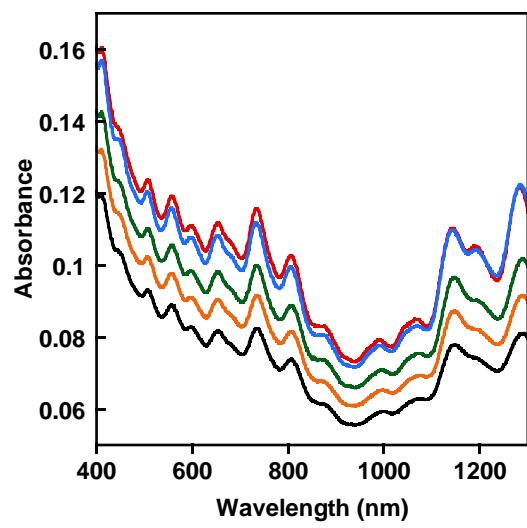


Figure S6. Absorption spectra of the SWNT/PNIPAM (NIPAM : BIS = 18 : 1) before (red line) and after one (blue line), two (green line), three (orange line) and four (black line) ultracentrifugations at 600000 g.

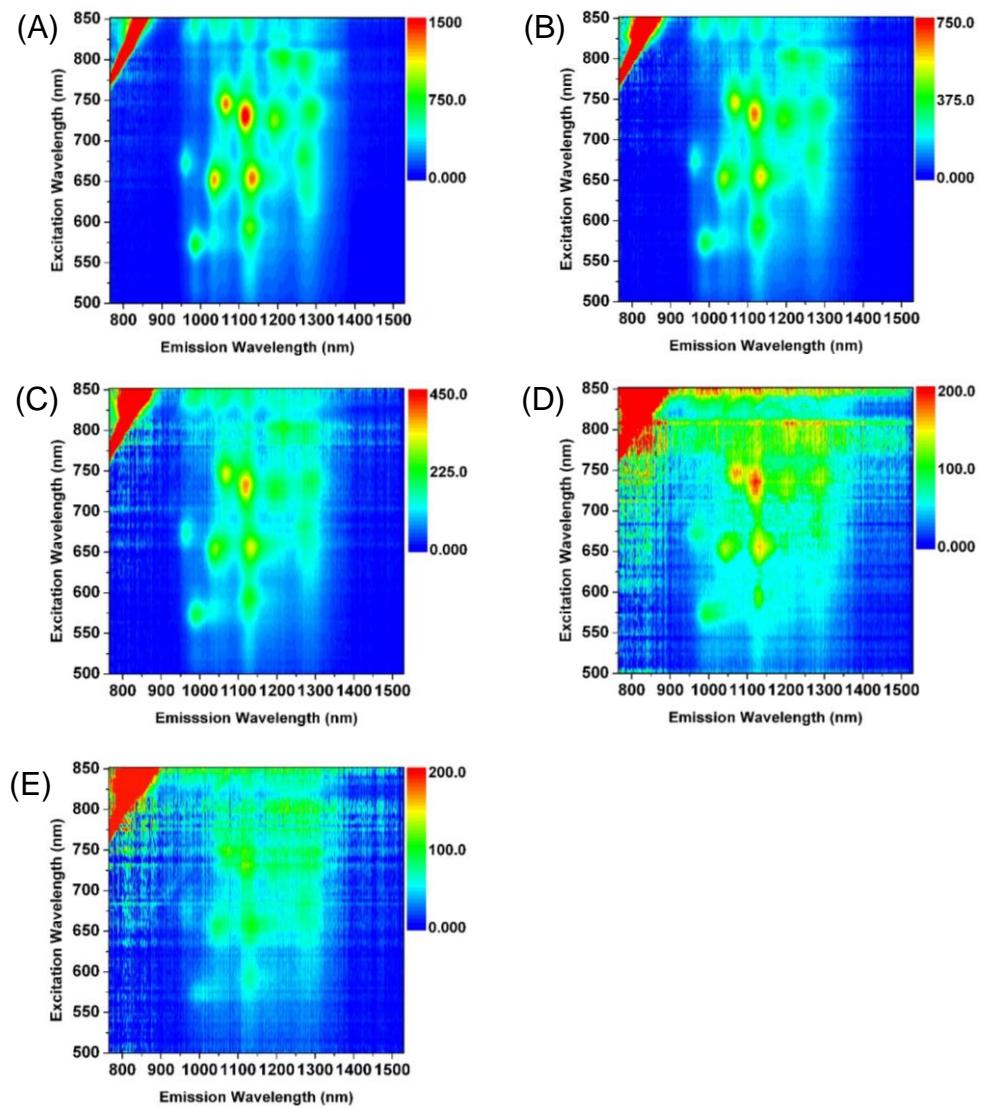


Figure S7. PL mappings of the SWNT/PNIPAM (NIPAM : BIS = 18 : 1) before (A) and after one (B), two (C), three (D) and four (E) ultracentrifugations at 600000 g.