Supporting Information

A Micro-Centrifugal Technique for Improved Assessment and Optimization of Nanomaterial Dispersions: The Case for Carbon Nanotubes

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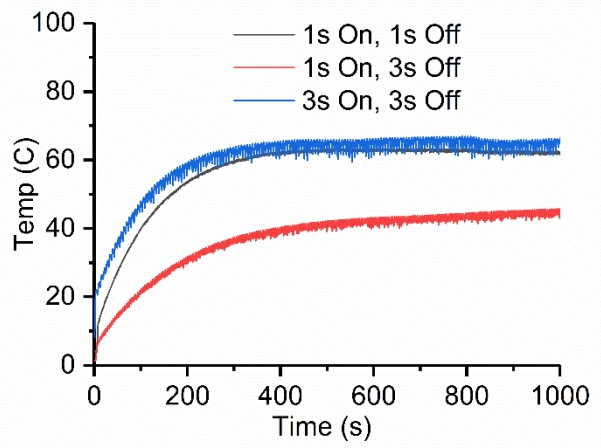

Figure S1 – The heating effect of the ultrasonic horn when in pulse-mode was probed to ensure solvent heating was not approaching boiling point during operation. For this test 15 mL of water was subject to ultrasonic agitation at 40 W/mL (80% power), the highest output used in this study, for the specified pulse intervals. The temperature of the water was monitored with a thermocouple. As the data shows the water temperature did not exceed 65 °C for the 3sec on, 3sec off chosen for the study. Should a more volatile solvent be used such as ethanol, we recommend a pulsed interval of 1sec on, 3sec off, as this kept the solution around 40 °C.

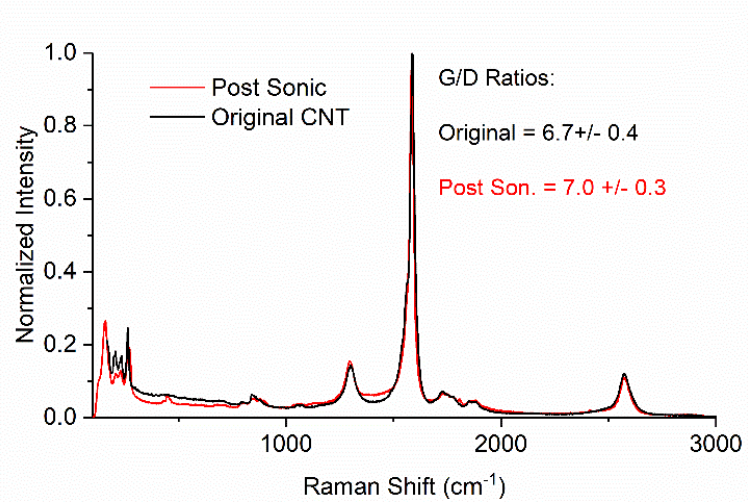

Figure S2 – The Raman spectra obtained from the CNTs before and after ultrasonication has been applied. Comparing the two spectra revealed that the CNTs were not damaged as a result of the sonication application through a D/G ratio that does not increase.

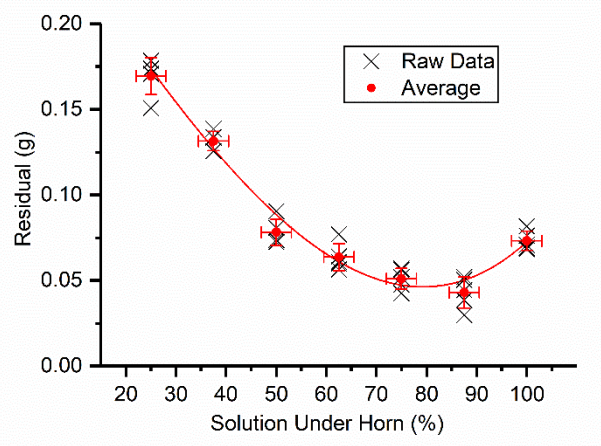

Figure S3 – The raw data set used for the horn depth investigation, showing the five measurements that were averaged for each horn depth. The line is a best fit to the mean value at each horn depth.