# Phospholipid-Dextran with a Single Coupling Point: a Useful Amphiphile for Functionalization of Nanomaterials

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**Supplemental Information Contents:**

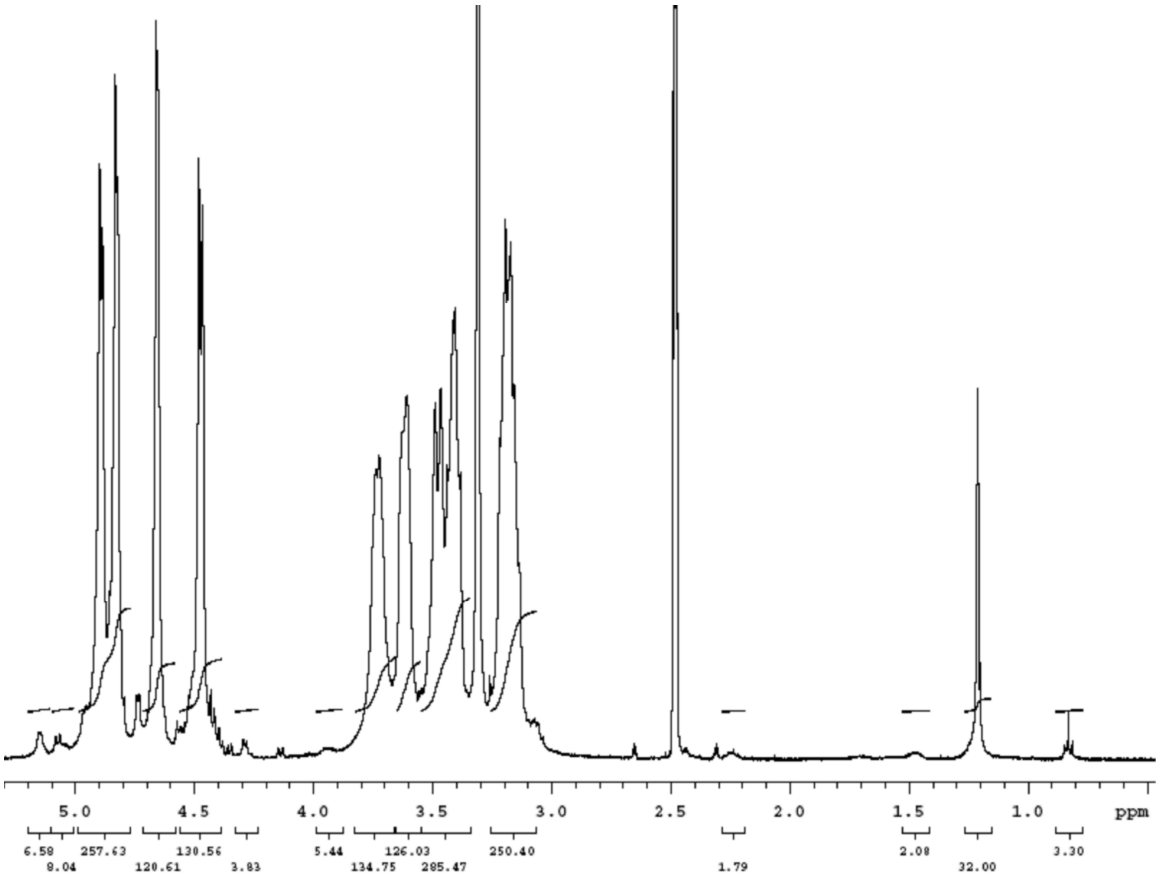


**Figure S1:** $^{1}$H NMR of **1** in DMSO-$d_6$, after removal of any insoluble impurities. The large peak at 2.49 ppm is DMSO and the narrow singlet at 3.3 ppm is water. The peaks from ~ 4.4-5.0 correspond to dextran hydroxyls, while the peaks from ~3.0-3.8 correspond to carbon-bound protons. Since the average molecular weight of the dextran is 17.5 kDa, this corresponds to an average of approximately 108 repeat units. The singlet at 1.2 ppm corresponds to the alkyl protons on the DSPE (two 18-carbon chains minus two terminal methyl groups and the protons adjacent to the carboxyl group. The ratio of the integration of the 32H in the DSPE matches approximately the integration in the dextran peaks, indicating one DSPE per dextran.

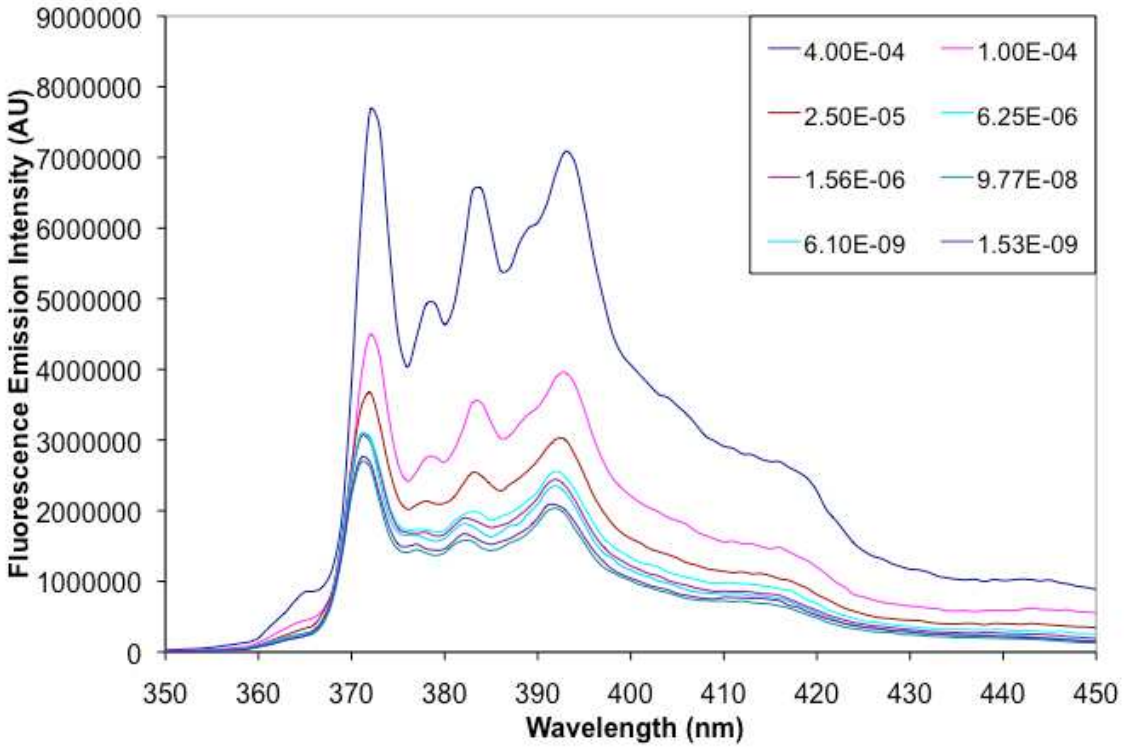


**Figure S2:** Fluorescence emission spectra of pyrene ($\lambda_{exc}$ = 340 nm) at various concentrations of **1** as indicated in legend (concentrations in M). After subtracting a water blank (not shown), the ratio of the emission intensities at 373 and 383 nm were used to obtain the data shown in Figure 1 in the main text.

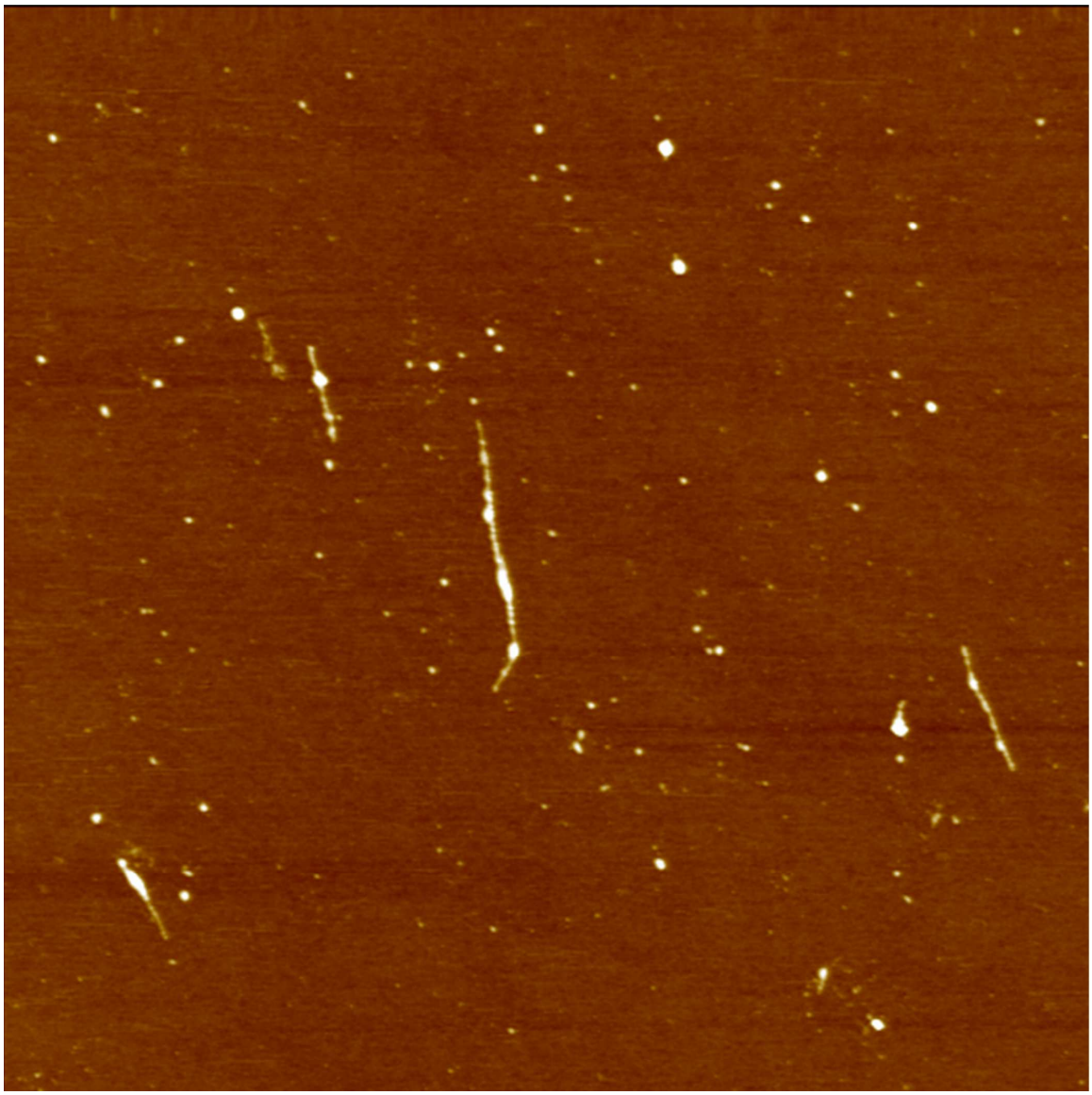

**Figure S3:** Atomic Force Microscope height image of 1-suspended SWNTs after removal of excess 1 on bare Si. Image represents an area of 3.5 μm x 3.5 μm.

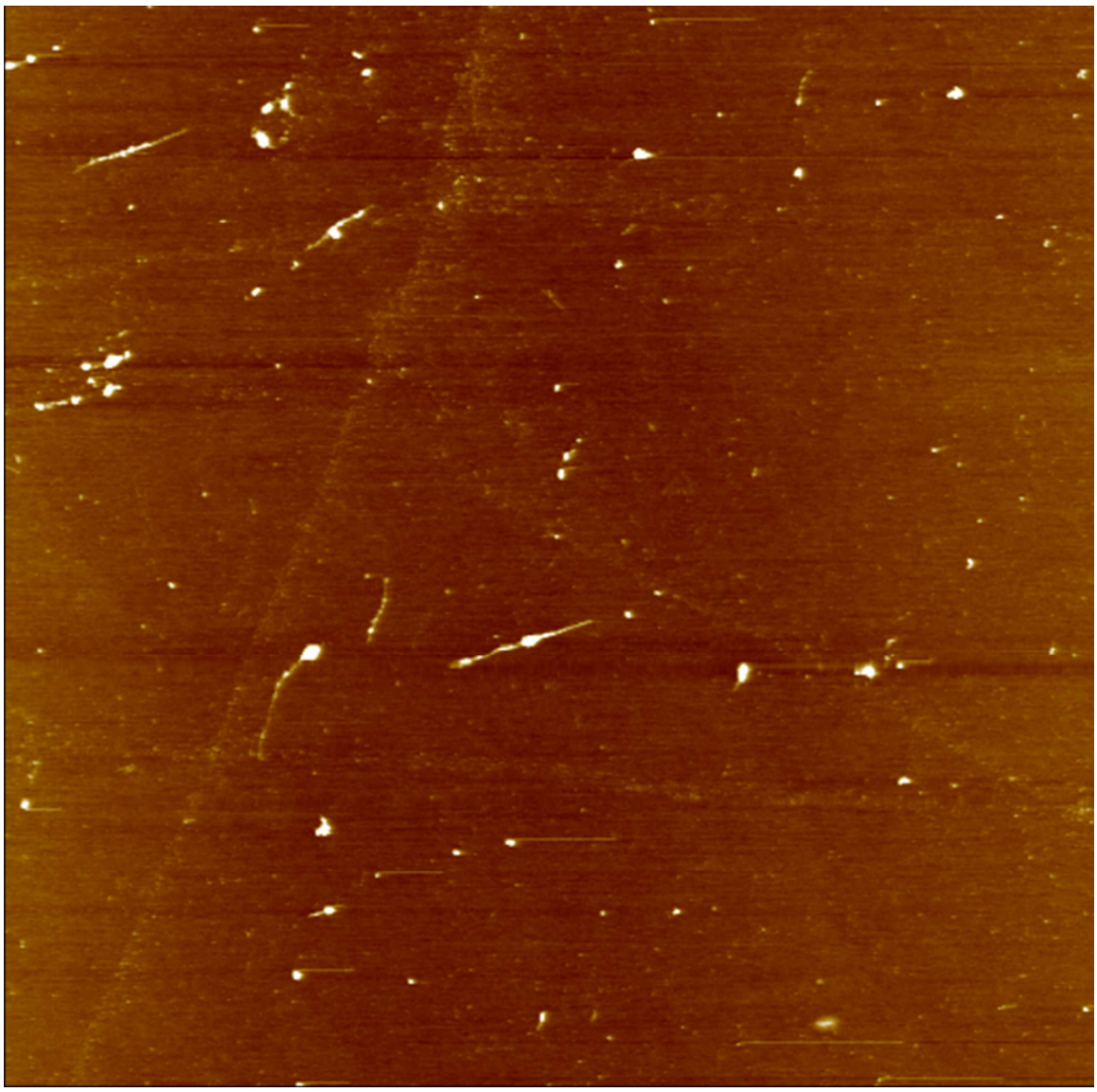

**Figure S4:** Atomic Force Microscope height image of 1-suspended SWNTs after removal of excess 1 on bare Si. Image represents an area of 3.0 μm x 3.0 μm.

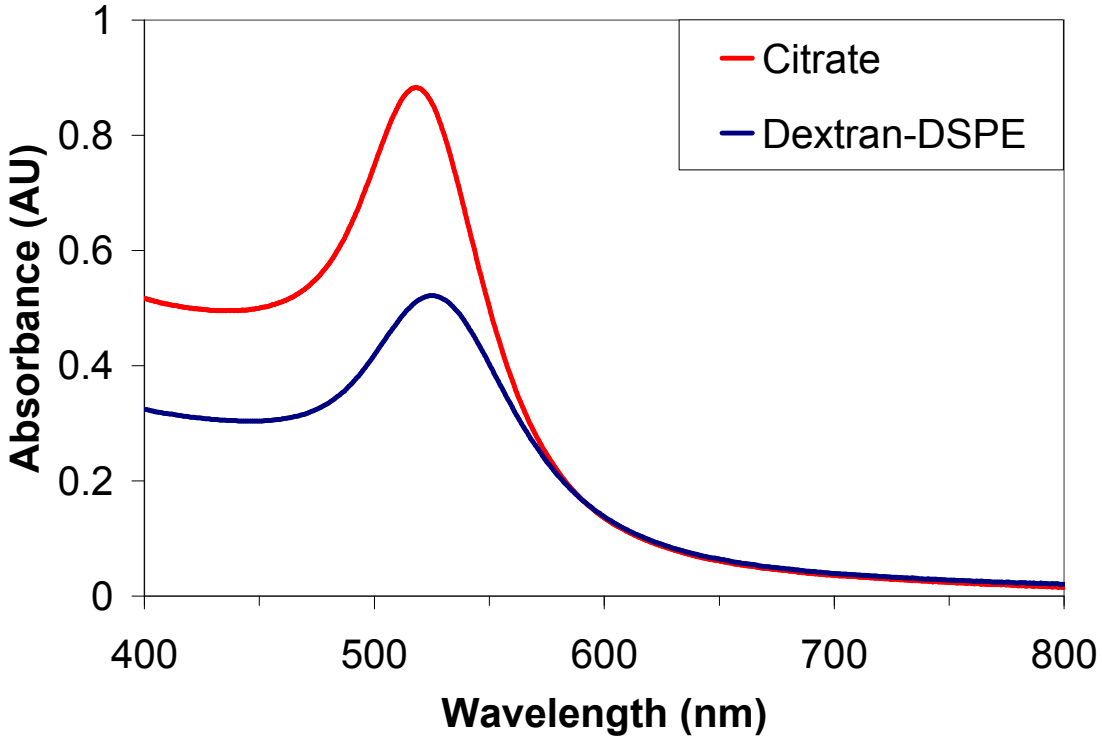


**Figure S5:** UV-Vis absorption spectra of 20 nm AuNP suspended in citrate (red) and 1 (blue). The citrate solution has not been washed, while for 1 the excess polymer has been washed away four times.

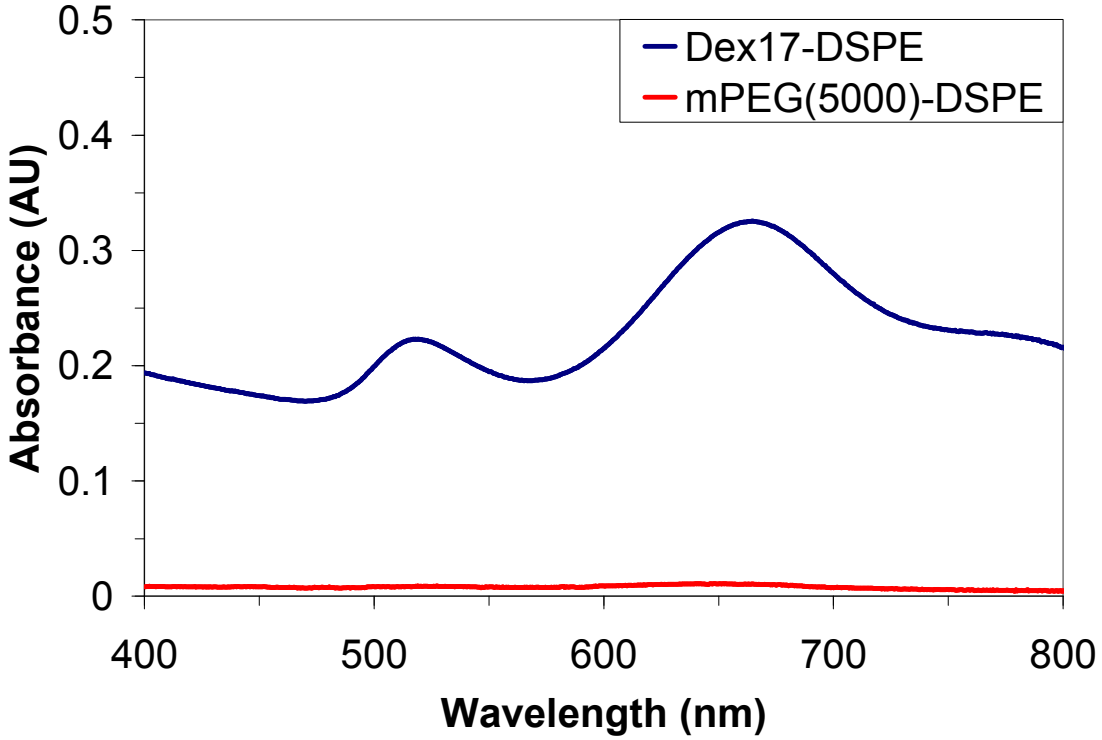


**Figure S3:** Comparison of suspensions of AuNRs in Dex17-DSPE (blue) and mPEG(5000)-DSPE (red). Note: this original batch of AuNRs is different than that presented in the main text, as can be seen by the maximum absorbances of the longitudinal and transverse peaks.