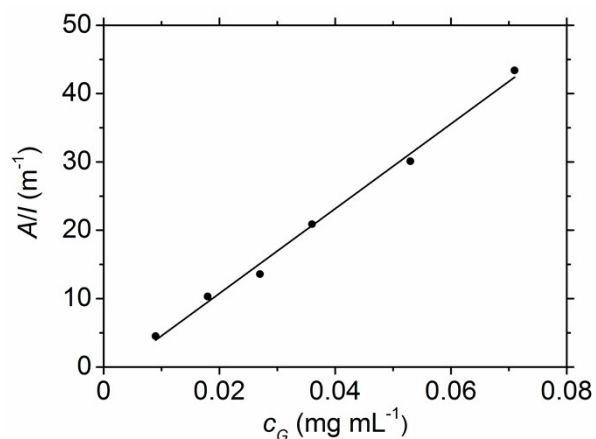


## Supplementary Information

### Phospholipid-mediated exfoliation as a facile preparative method for graphene suspensions

Aled T. Williams, Roberto Donno\*, Nicola Tirelli\* and Robert A. W. Dryfe

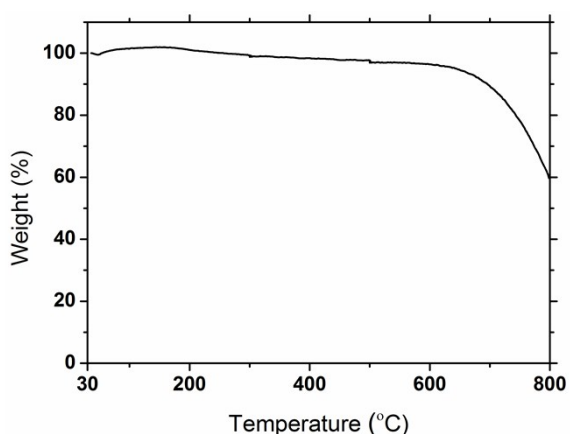
#### Determination of extinction coefficient:



**Figure S1.** Absorbance at  $\lambda = 660$  nm per unit length as a function of the concentration of DOPC-stabilized dispersed graphene,  $c_G$ , in deionized water. The initial graphite and DOPC concentrations were 5.0 and 0.2 mg mL<sup>-1</sup> respectively.

#### Thermogravimetric analysis (TGA):

TGA measurements on a graphene reference (exfoliated in NMP) were performed on a Q500 instrument (TA Instruments, USA) under a nitrogen atmosphere and at 10 °C min<sup>-1</sup> using a temperature range of 20-800 °C, with isothermal stages at 300 °C and 500 °C.



**Figure S2.** TGA of graphene; prepared from exfoliation in NMP for reference.

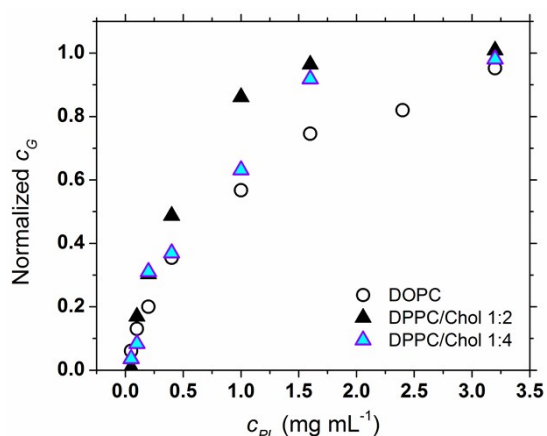
**Equation 1 (DOPC surface coverage of graphene flakes):**

Under the assumption of complete adsorption, an approximated area per adsorbed DOPC molecule can be

calculated by dividing the total of DOPC molecules ( $\frac{c_P}{MW_P} N_A$ ; the DOPC molecular weight is  $786 \text{ g mol}^{-1}$ ) by the available surface area of graphene. The latter can be estimated from the concentration of graphene divided its density (corresponding to the volume fraction of graphene in the sample) and the average thickness of the flakes through the equation:

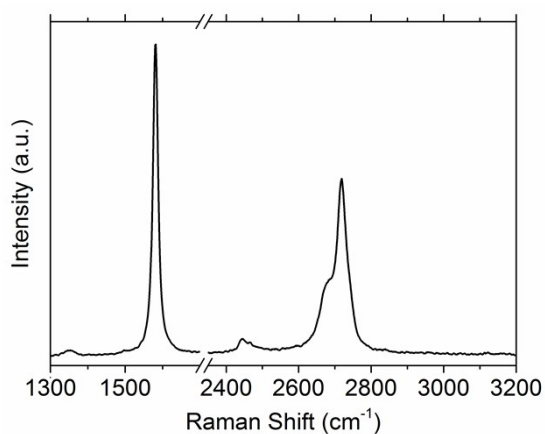
$$\theta = 0.5 \frac{c_P \rho_G \bar{z}}{c_G MW_P} N_A$$

where  $\rho_G$  is the density of the graphite used ( $2200 \text{ kg m}^{-3}$ ), and  $\bar{z}$  is the mean height of the flakes (assumed to be  $6.4 \text{ nm}$ , see the AFM data). The factor 0.5 takes into account that the flakes have two surfaces. The ratio  $\frac{c_P}{c_G}$  is constant in the 'linear' part of the graph and corresponds roughly to 1.5.



**Figure S3.** Data from Figure 1F plotted by normalizing the graphene concentration (1 = asymptotic values).

**Raman spectroscopy:**



**Figure S4.** Raman spectrum of the graphite powder used.