Supplementary materials

Dynamic light scattering measurements

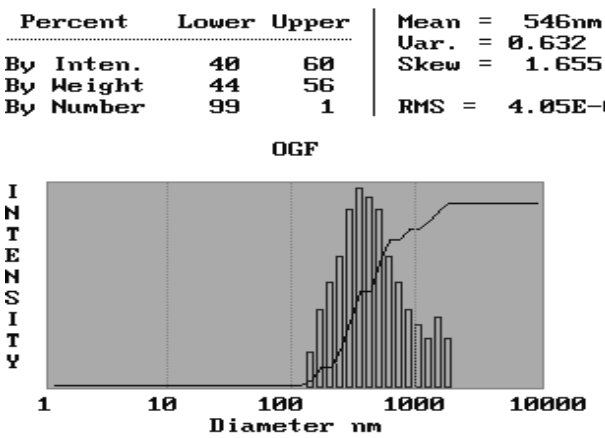
In this study, we decided to carry out DLS (Dynamic light scattering), which is a technique that can be used to determine the size distribution profile of small particles in suspension or polymers in a solution, in order to gather information about changes in size distribution of graphene oxide (GO) nanoparticles. In short, the linearly polarized light beam of a 35 mW HeNe laser (Spectra Physics mod. 127) was focused by a 300 mm focal length lens on the sample cell, which consists of a quartz cylindrical cuvette (2 cm inner diameter).

The autocorrelation functions of the scattered light were constructed by a Brookhaven Instruments 2030AT digital correlator, processing the photocurrent pulse produced by a 9863A Thorn-EMI photomultiplier with built-in amplifier-discriminator. Light was collected at the scattering angle of 90° and a light collimator with a 50 mm pinhole allowed us to operate always with at least one coherence in the regime of pure homodyne detection. The autocorrelation function was Laplace inverted by the CONTIN routine.

As reported in Figure S1, Dynamic Light Scattering (DLS) measurements show that GO particles have an average size distribution range between 500 and 700 nm.

Percent	Lower	Upper
By Inten.	40	60
By Weight	44	56
By Number	99	1

Mean = 546nm
Var. = 0.632
Skew = 1.655
RMS = 4.05E-03



d/nm	G(d)	C(d)
30	0	0
40	0	0
53	0	0
71	0	0
95	0	0
131	19	3
168	39	9
217	66	19
279	90	33
358	100	48
461	90	62
593	66	72
763	39	78
1227	25	81
1487	36	87
1802	25	91
3000	0	91
dust	61	100

Figure S1: Particle size distribution was determined through DLS at an angle of 90°