

Optimizing the hybrid nanostructure of functionalized reduced graphene oxide/silver for highly efficient cancer nanotherapy

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Supplementary information 1:

Mohr method was employed to calculate the amount of Ag loaded. In this method, free silver ions react with potassium chromate (K_2CrO_4), known as an indicator, and then form a red-brown precipitate. Hence, the standard curve of potassium chromate was plotted by preparing specific concentrations of solution and then the absorbance of each sample was measured at 445 nm via spectrophotometer (Fig. S1). The supernatant of GPA precipitate was isolated and reacted with a certain amount of potassium chromate solution (for 15-30 min), the resulted solution was centrifuged and the absorbance of the supernatant was measured so that the concentration of potassium chromate was calculated using the standard curve of that.

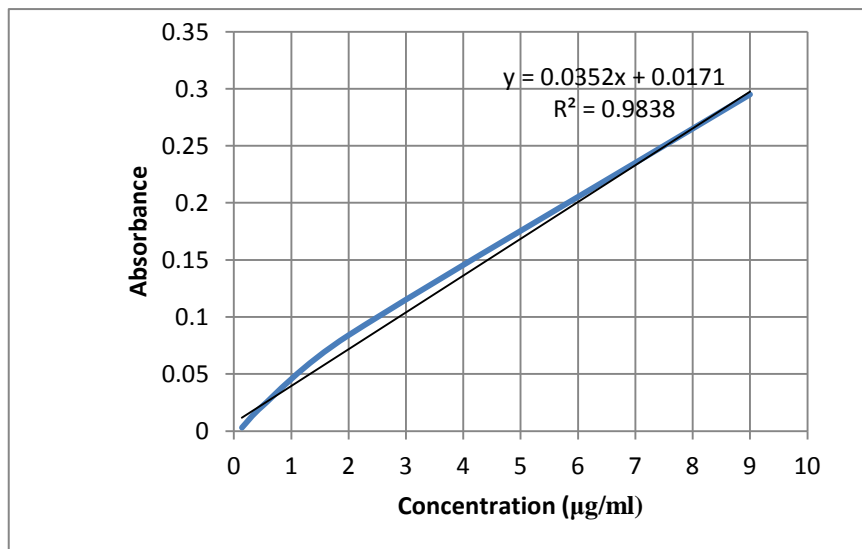
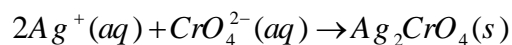


Figure S1. Standard curve of potassium chromate

The amount of potassium chromate that reacts with free silver ions could be calculated from the difference in the initial and obtained concentration of potassium chromate. Then, the amount of Ag loaded on rGO was calculated using this formula:



Supplementary information 2:

Table S1. Experimental results of loaded Ag on the surface of rGO

Temperature (°c)	Time (min)	Ag loaded (µg/ml)
20	15	1.23
	60	1.4
	105	1.2
40	15	1.67
	60	2.03
	105	1.73
60	15	1.23
	60	1.5
	105	1.4

Supplementary information 3:

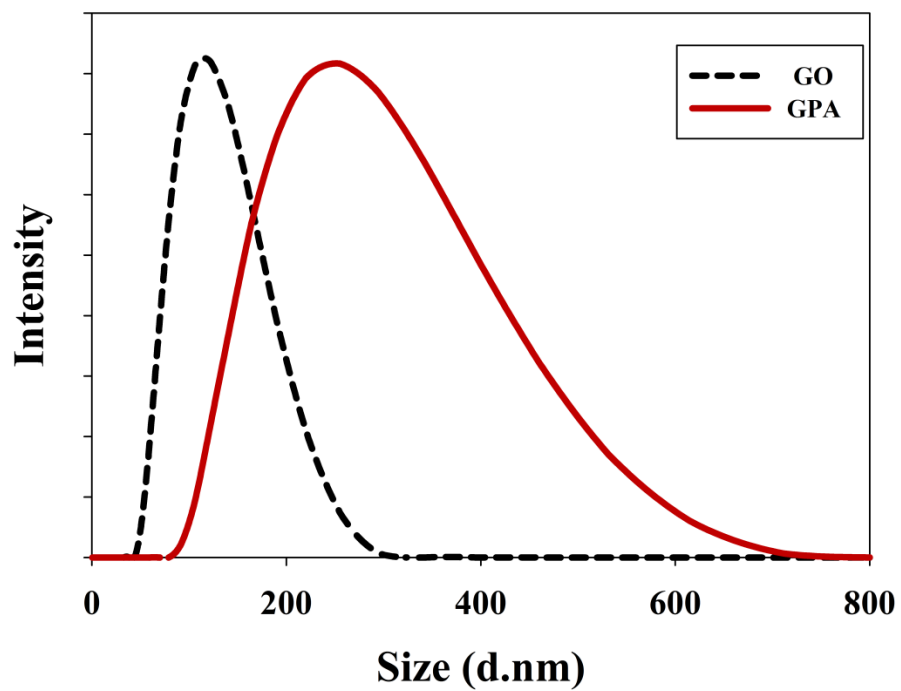


Figure S2. Size of GO and GPA