Supporting Information for

ORIGINAL ARTICLE

Accurate construction of cell membrane biomimetic graphene nanodecoys *via* purposeful surface engineering to improve screening efficiency of active components of traditional Chinese medicine

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Samples preparation for TEM：

1. 300 mesh carbon coated grids were used.
2. GO, PMGO, and HPMGO solution were prepared and ultrasonicly dispersed evenly. (GO and PMGO were dispersed in ethanol at a concentration of 0.1 mg/mL, while HPMGO was dispersed in water at the same concentration.)
3. A drop (approx. 20 μL) of GO, PMGO, and HPMGO solution was placed on the grid, respectively.
4. Samples were dried overnight in a Petri dish and observed the next day in TEM.

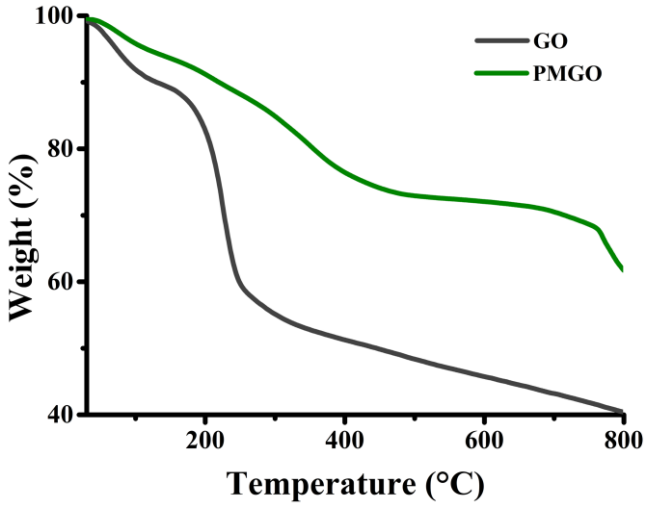

Figure S1 TGA analysis results of GO and PMGO.

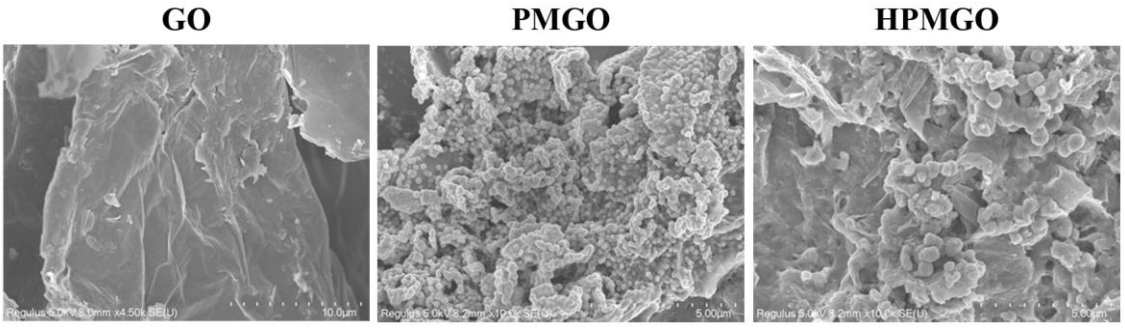

Figure S2 SEM characterization of GO (scale bar=10.0 μm), PMGO (scale bar=5.00 μm), and HPMGO (scale bar=5.00 μm).

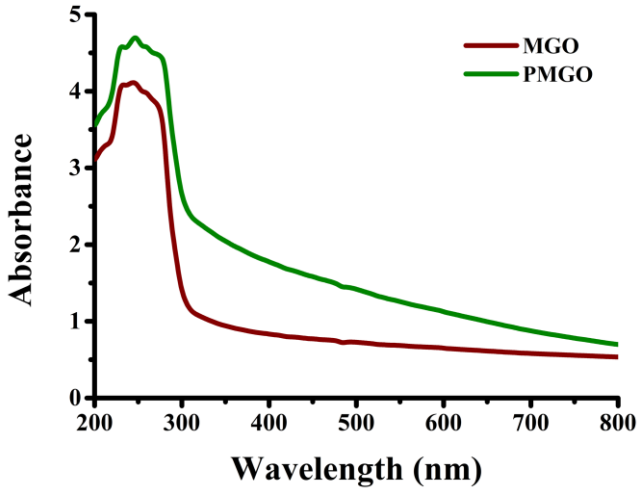

Figure S3 UV/Vis spectra of MGO and PMGO.

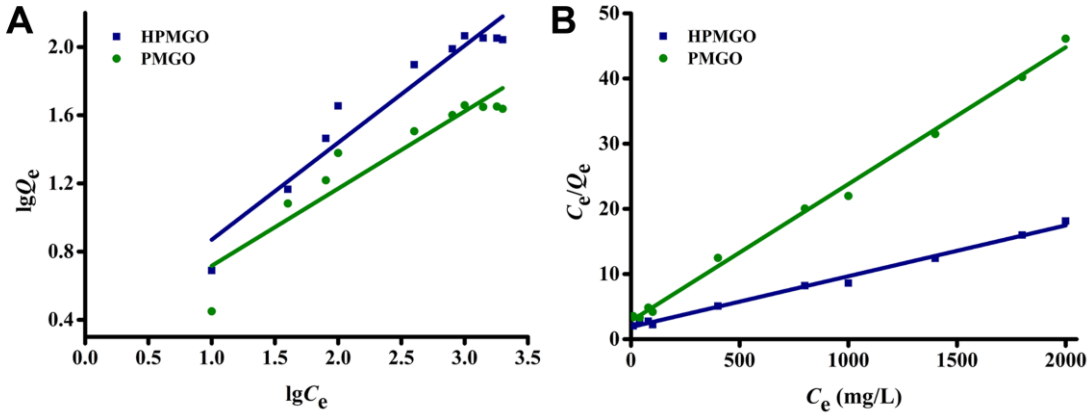

Figure S4 (A) Freundlich and (B) Langmuir isotherm models to fit the equilibrium adsorption data of PMGO and HPMGO.

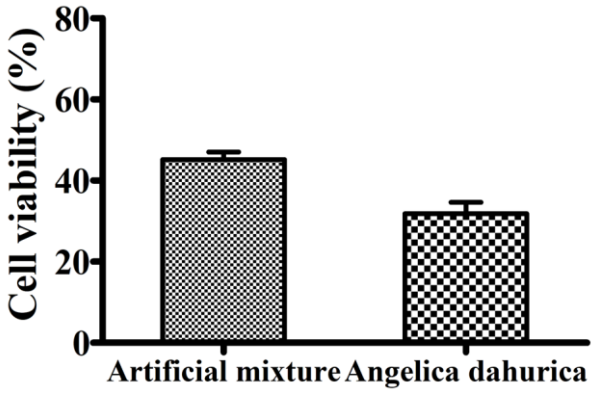

Figure S5 The cytotoxicity of HeLa cells incubated with the artificial mixture and *Angelica dahurica*. Data are presented as mean±SD (*n*=3).

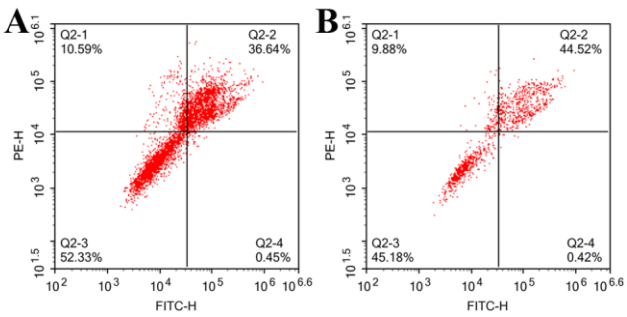

Figure S6 The apoptosis of HeLa cells incubated with the (A) artificial mixture, and (B) *Angelica dahurica*.

Table S1 Equations and parameters of adsorption isotherms of PMGO and HPMGO.

Isotherm model	Equation and parameters	HPMGO	PMGO
Freundlich	$lgQ_e = lgK_F + mlgC_e$		
	K_F (L/mg)	1.9943	0.9987
	m	0.5694	0.4530
	r	0.9652	0.9887
Langmuir	$\frac{C_e}{Q_e} = \frac{1}{Q_{max}K_L} + \frac{1}{Q_{max}}C_e$		
	K_L (L/mg)	0.0042	0.0075
	Q_{max} (mg/g)	128.21	47.62
	r	0.9963	0.9981

HPMGO, Hela CM coated PEGylated magnetic graphene oxide; PMGO, PEGylated magnetic graphene oxide.

Table S2 Kinetic parameters for adsorption of vinorelbine ditartrate onto HPMGO and PMGO.

Kinetic model	Model parameters	HPMGO	PMGO
Pseudo-first-order	K_1 (min^{-1})	0.5516	1.9713
	q_e (mg/g)	37.58	15.74
	r	0.9907	0.9835
Pseudo-second-order	K_2 (g/mg/min)	0.0186	0.1892
	q_e (mg/g)	41.23	16.36
	r	0.9915	0.9975

HPMGO, Hela CM coated PEGylated magnetic graphene oxide; PMGO, PEGylated magnetic graphene oxide.