



## Supporting Information for

# Thermo-responsive Graphene Oxide/Poly(ethyl ethylene phosphate) Nanocomposite via Ring Opening Polymerization

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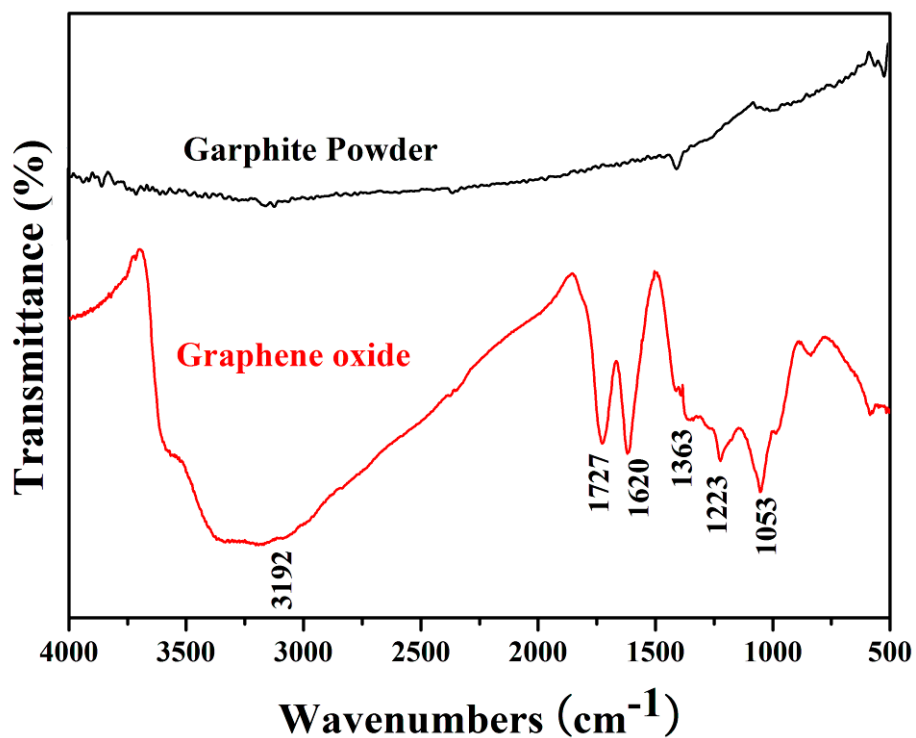


Figure S1. FT-IR spectra of natural graphite powder and graphene oxide.

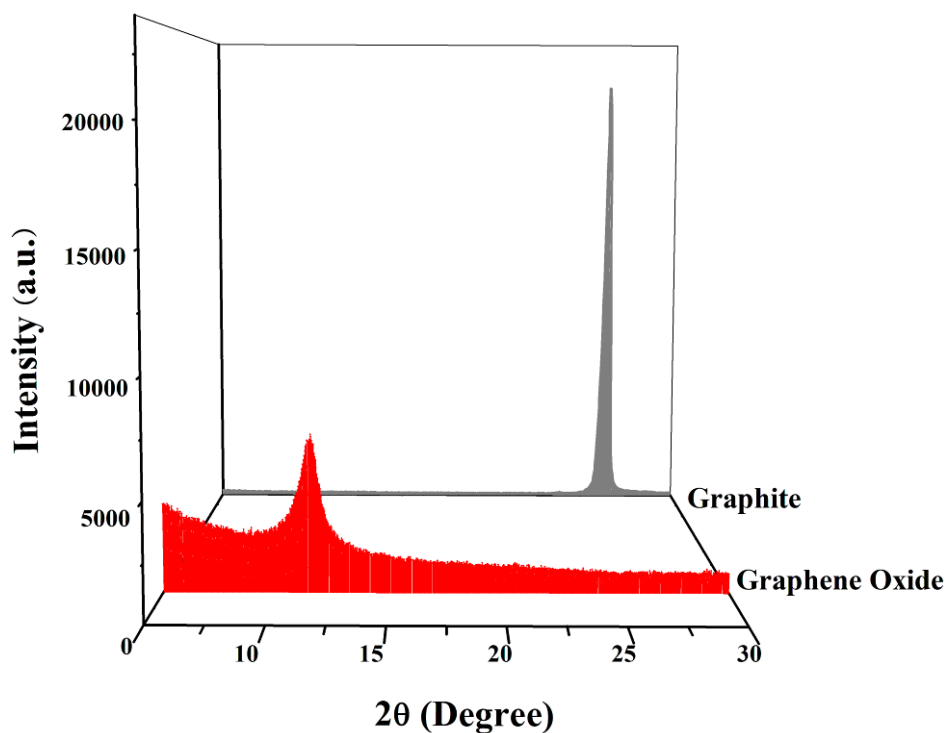
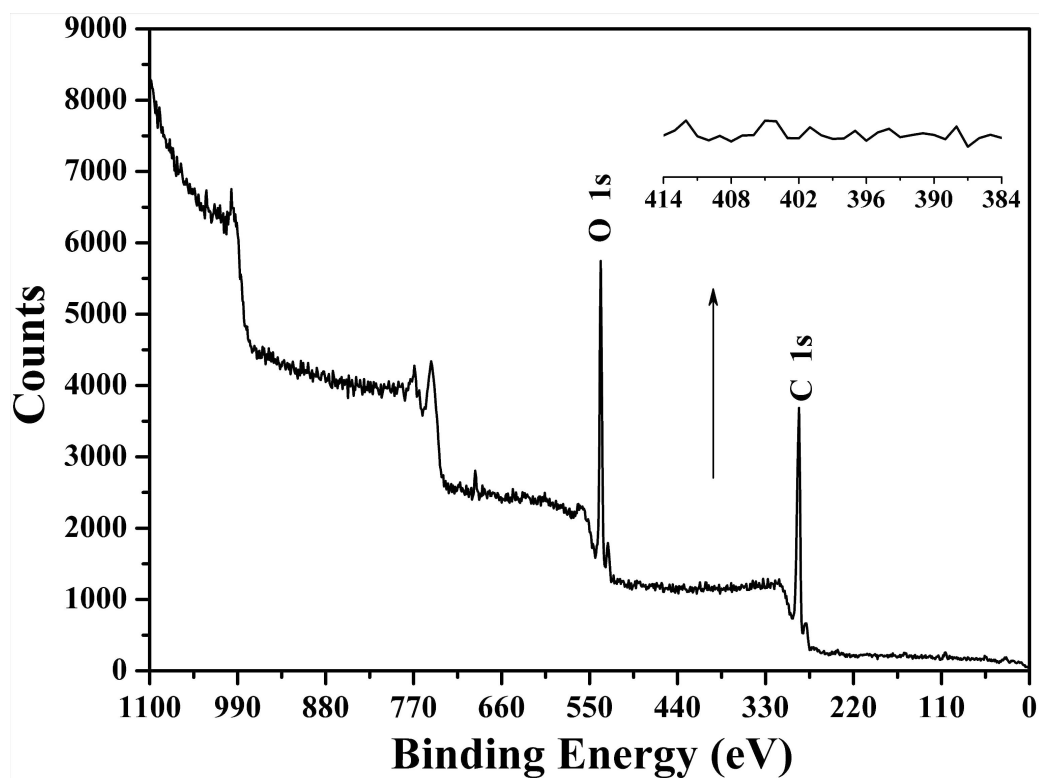


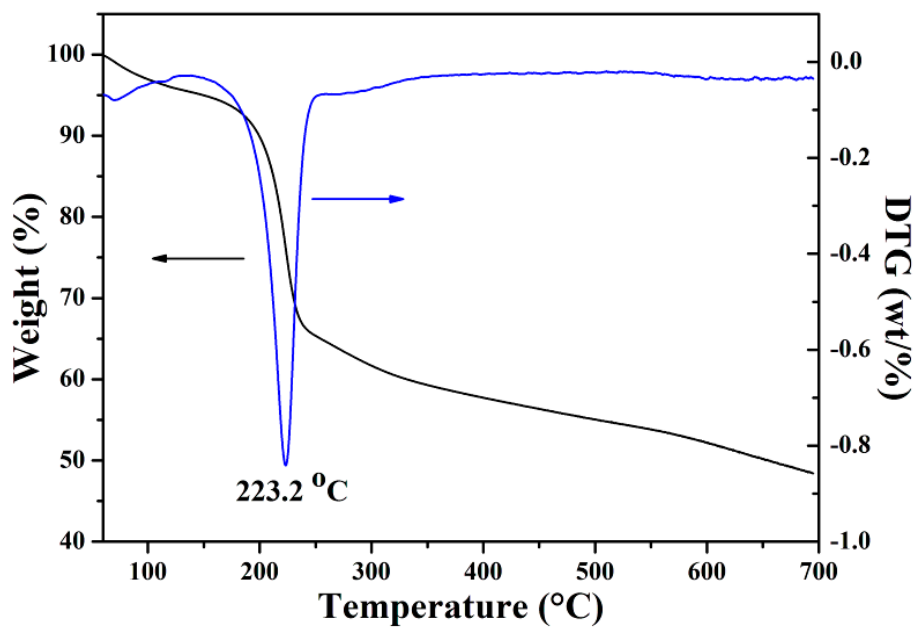
Figure S2. X-ray diffraction patterns of natural graphite powder and graphene oxide.

**Table S1.** Elementary analysis of graphite and graphene oxide

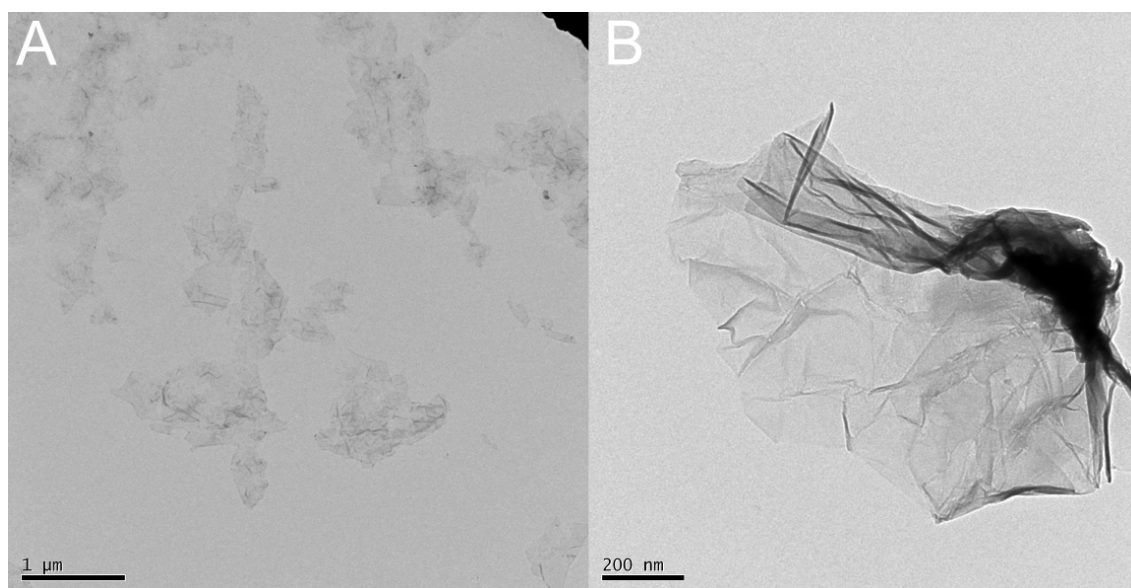
Sample	Elemental Analysis (wt%)	
	C	O
Nature graphite	100	<0.5
Graphene oxide	43.53	52.89



**Figure S3.** Survey XPS data for graphene oxide, the inset curve indicates that there is no N1s spectrum in XPS of graphene oxide.



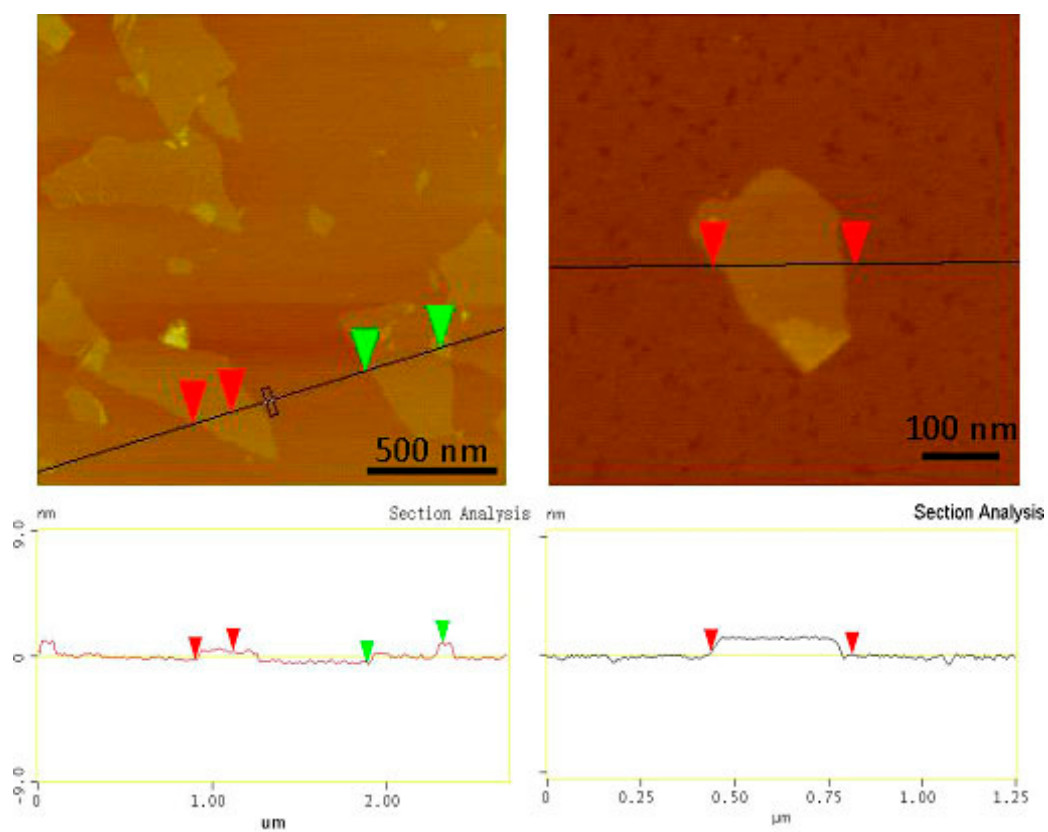
**Figure S4.** TGA (black) and DTG (blue) curves of graphene oxide.



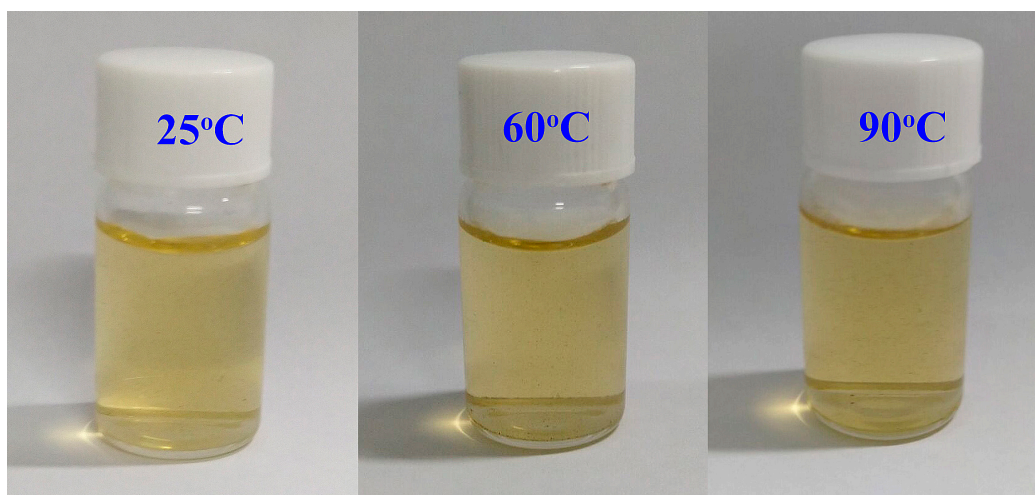
**Figure S5.** TEM images of graphene oxide with different scale bars in length, (A) 1 μm and (B) 200 nm.



**Figure S6.** Dispersion of GO-TRIS-PEEP in methanol with a concentration of about 0.5 mg/mL.



**Figure S7.** AFM images of graphene oxide.



**Figure S8.** The photographs of graphene oxide aqueous solutions in different temperature with a concentration of 0.5 mg/mL