

Electronic supporting information
for
**Uniform distribution of graphene oxide sheets into poly-
vinylidene fluoride nanoparticle matrix through shear-
driven aggregation**

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Synthesis of Graphite Oxide

In a typical procedure, 5.0 g graphite powder, 5.0 g sodium nitrate (NaNO₃) and 250 mL of concentrated sulfuric acid (H₂SO₄) were mixed and stirred for 20 min in a 2000 mL round flask in an ice bath. Then, 30 g of KMnO₄ was slowly added into the flask in 30 min in the ice bath. The mixture was stirred continuously for 48 h, after which 460 mL of water was added dropwise into the suspension within 30 min under stirring. The suspension was further treated with 420 mL of warm water (50~60 °C) and 100 mL of H₂O₂ (30%) to reduce residual KMnO₄ and MnO₂ to

soluble manganese sulfate. The mixture was centrifuged and washed with a solution of 6 wt% H_2SO_4 /1 wt% H_2O_2 to further remove residual metal oxides. Then the product was washed with water several times, dialyzed for one week and the graphite oxide sample was obtained after freeze-drying for two days.

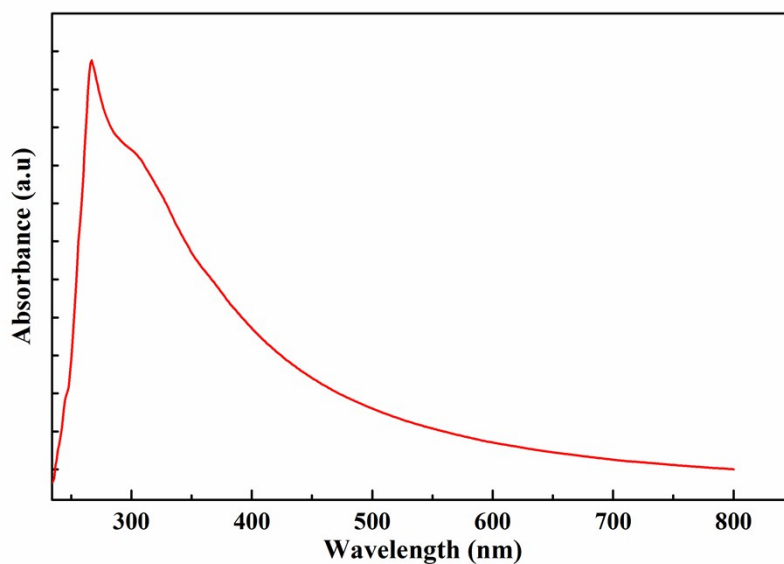


Fig. S1 UV-vis absorption spectra of exfoliated graphene oxide (GO) sheets dispersed in DMF.