

Supporting Information

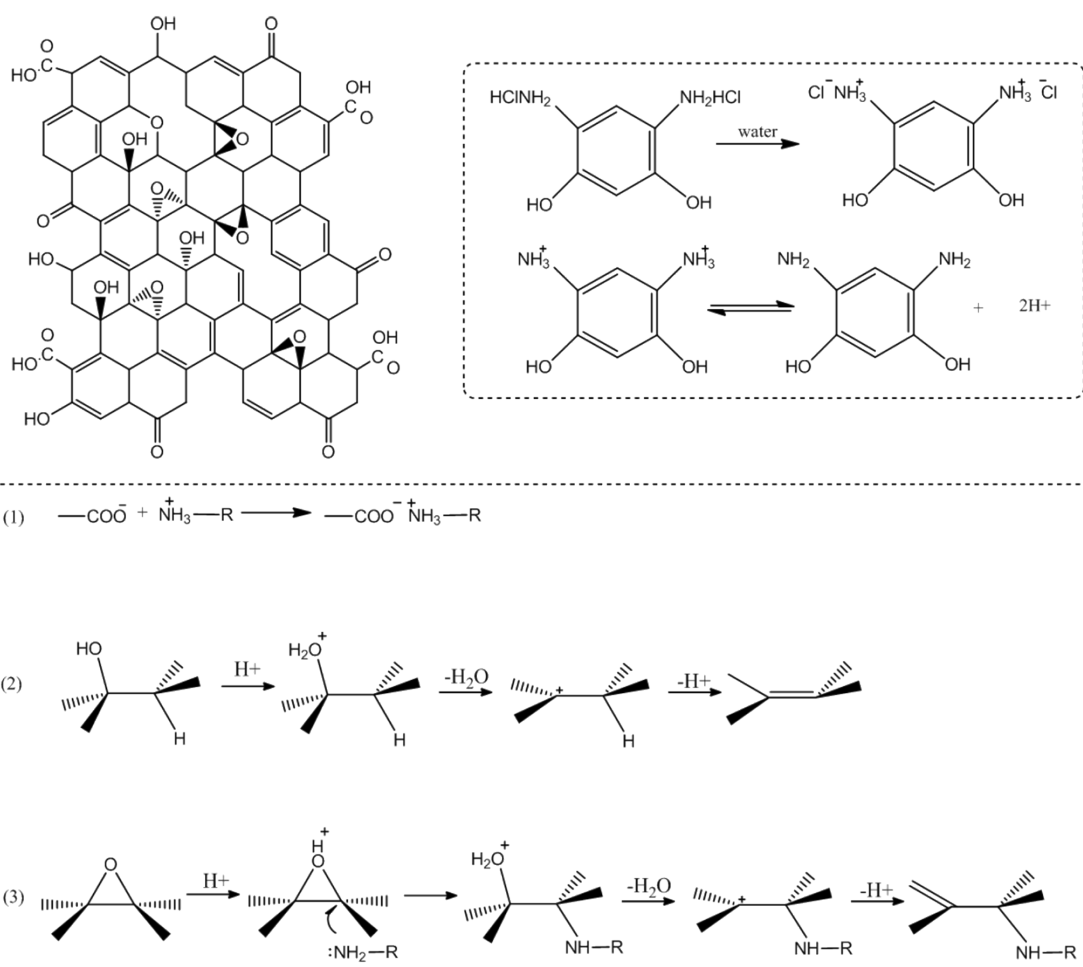


Figure. S1 Possible reduction mechanism and procedure for preparing the rGO-DAR.

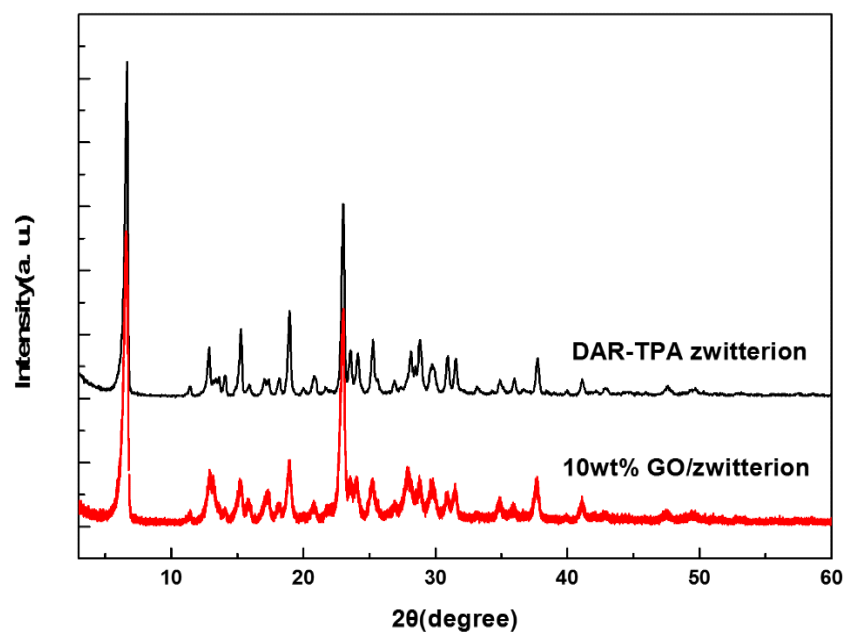


Figure. S2 XRD patterns of DAR-TPA zwitterions and 10wt% GO/zwitterions.

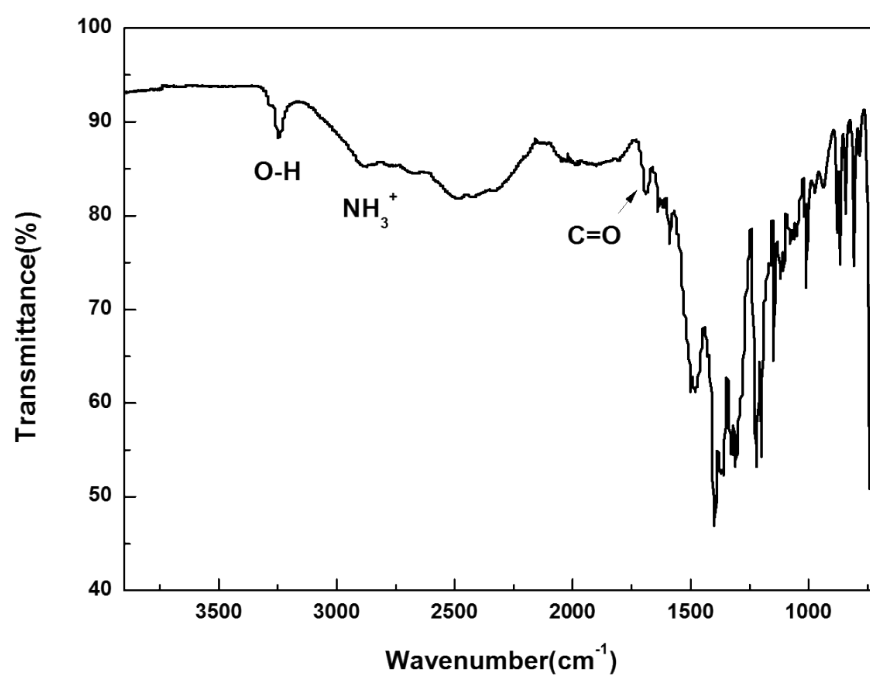


Figure. S3 FTIR spectrum of neat DAR-TPA zwitterions.

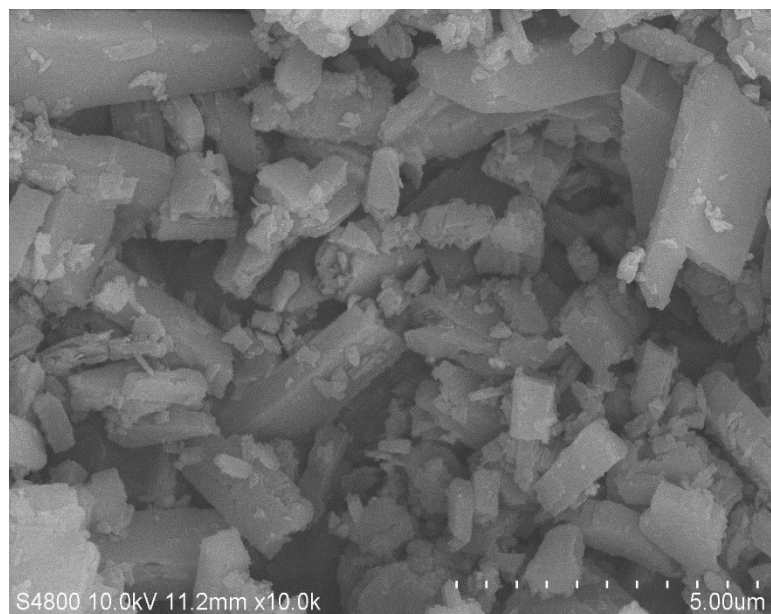


Figure. S4 SEM image of neat DAR-TPA zwitterions.

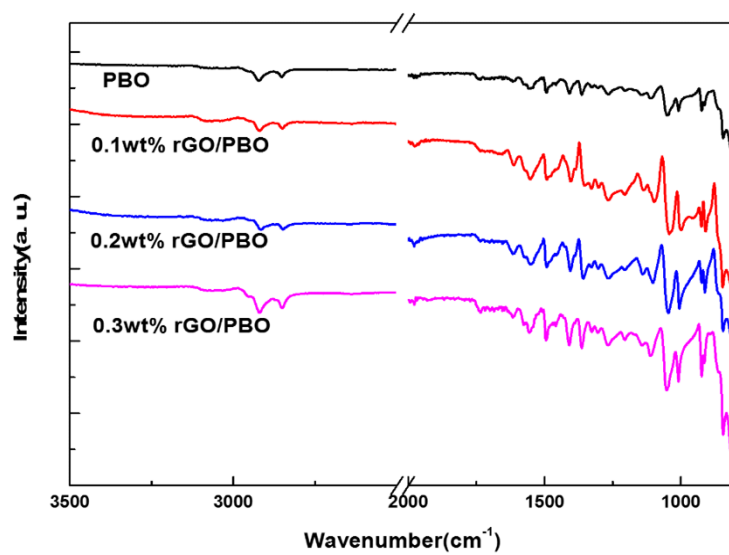


Figure. S5 FTIR spectra of neat PBO fibers, 0.1wt% GO/PBO fibers, 0.2wt% rGO/PBO fibers, and 0.3wt% rGO/PBO fibers.

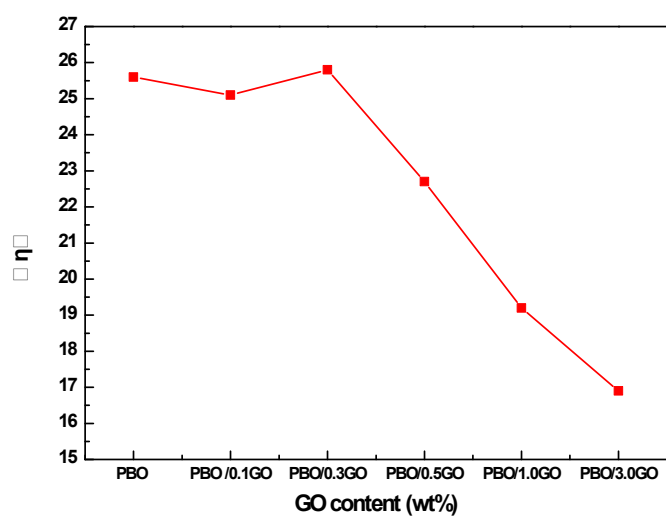


Figure. S6 Intrinsic viscosities of rGO/PBO composites.

PBO composites with GO incorporated less than 0.5 wt% were used in pilot test for spinning because the intrinsic viscosity decreased along with the increase of GO. It could be attributed to the consumption of DAR monomers by reacting with epoxy and carboxyl groups of GO.

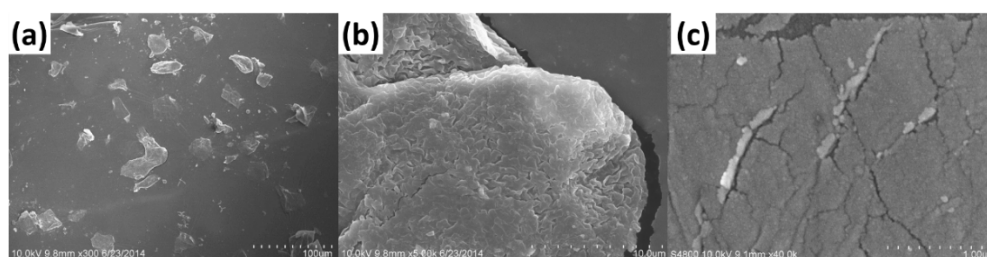


Figure. S7 SEM images of cross-section from graphene/PBO composite prepared by mechanical mixing.

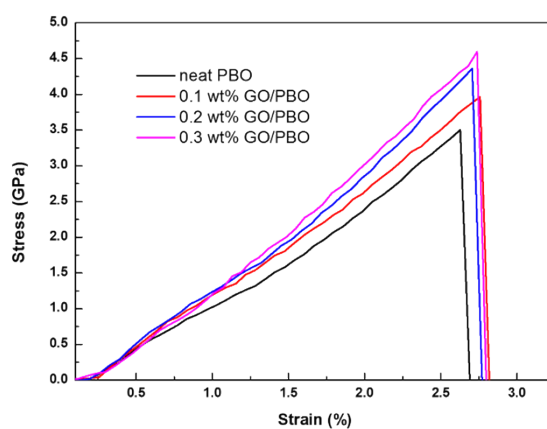


Figure. S8 stress-strain curve of rGO/PBO composite fibers.