Electronic Supplementary Information (ESI) for

Cetyltrimethylammonium bromide intercalated

graphene/polypyrrole nanowire composites for high performance

supercapacitor electrode

Lu Mao^a, Hardy Sze On Chan^{*a} and Jishan Wu^{*ab}

^a Department of Chemistry, National University of Singapore, 3 Science Drive 3, Singapore, 117543. Fax: (65) 6779 1691; E-mail: <u>chmcsoh@nus.edu.sg</u> (H.S.O. Chan), <u>chmwuj@nus.edu.sg</u> (J. Wu)

^b Institute of Materials Research and Engineering, A*Star, 3 Research Link, Singapore, 117602; E-mail: <u>wuj@imre.a-star.edu.sg</u> (J. Wu)



Fig. S1 FT-IR spectra of PPyGCR51, PPyGCR11 and PPyGCR13 composites.









Fig. S3 TGA curves of PPyGCR51, PPyGCR11, PPyGCR13 composites.



Fig. S4 N₂ adsorption–desorption isotherms of GCR (a), PPy (b), PPyGCR51 (c), PPyGCR11 (d), and PPyGCR13 (e). The insets are the corresponding pore-size distributions.



Fig. S5 Capacity retention of PPyGCR91 in 1 M KCl and 1 M H_2SO_4 versus the number of charge/discharge cycles under current density of 2 A g^{-1} .