Conducting Polymers Directly Coated on Reduced Graphene Oxide Sheets as High-performance Supercapacitor Electrodes

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Figure S1. XPS survey spectra of RGO (a), RGO-PEDOT (b), RGO-PANi (c), and RGO-PPy (d).



Figure S2. FESEM (a) and TEM (b) images of RGO sheets.



Figure S3. FESEM and HRTEM images of RGO-PEDOT with 67 wt.% (a and b) and 80 wt.% (c and d) loadings of PEDOT.



Figure S4. HRTEM images of samples RGO-PANi with 67 wt.% (a and b) and 80 wt.% loadings (c and d) of PANi.



Figure S5. FESEM and HRTEM images of sample RGO-PPy with 67 wt.% (a and b), and 80 wt.% (c and d) loadings of PPy.



Figure S6. TEM images of RGO-PEDOT (a and b), RGO-PANi (c and d) synthesized by the same method without ethanol.

The TEM images show substantial aggregation of polymer particles as indicated by the arrows formed in the absence of ethanol under otherwise the same experimental conditions, suggesting that ethanol is indispensable in the uniform coating process.



Figure S7. Cyclic voltammograms at a scan rate of 50 mV/s (a) and charge/discharge curves at a current density of 0.5 A/g (b) of RGO-PEDOT with different PEDOT loadings.



Figure S8. TEM image of PANi Fibers.