

Supporting information for C1JM012963E

High Performance Supercapacitors Using Metal Oxide Anchored Graphene Nanosheets Electrodes

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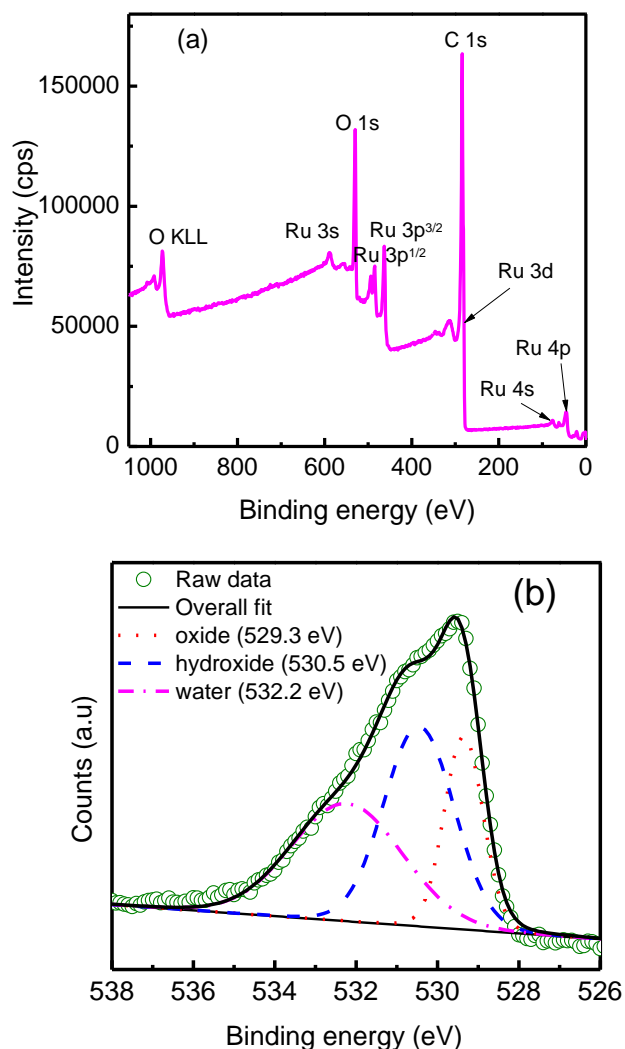


Figure S1(a) XPS survey spectra and for RuO₂/GNs nanocomposite **(b)** XPS narrow scan spectra of O 1s for the composite before annealing at 150°C

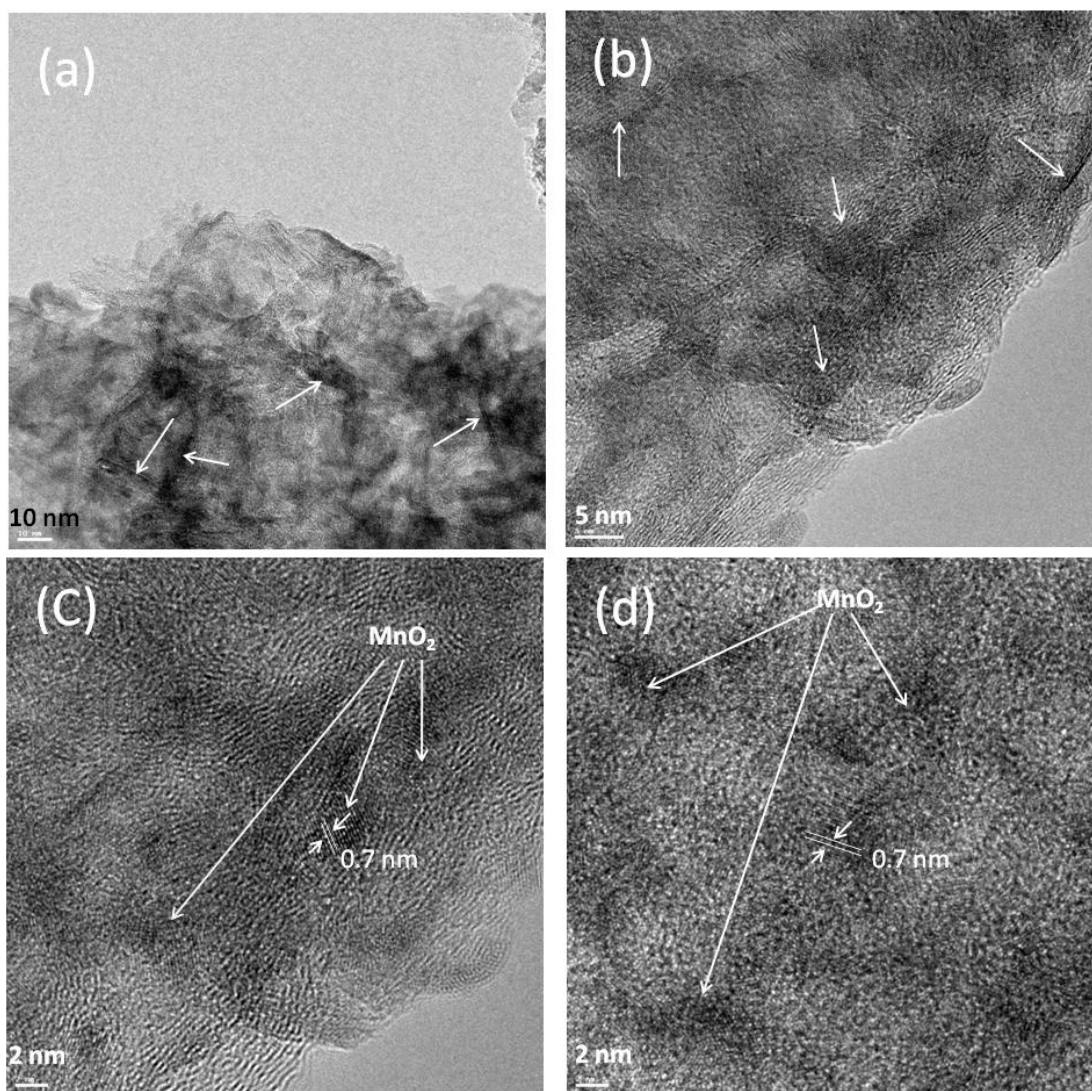


Figure S2 (a and b) TEM images of as prepared MnO₂/GNs nanocomposite, showing the preferred growth of MnO₂ near the edges of GNs (marked by arrows)
(c and d) HRTEM images showing MnO₂ nanocrystals with particle size nearly 2-5 nm with the interlayer spacing of 0.7 nm

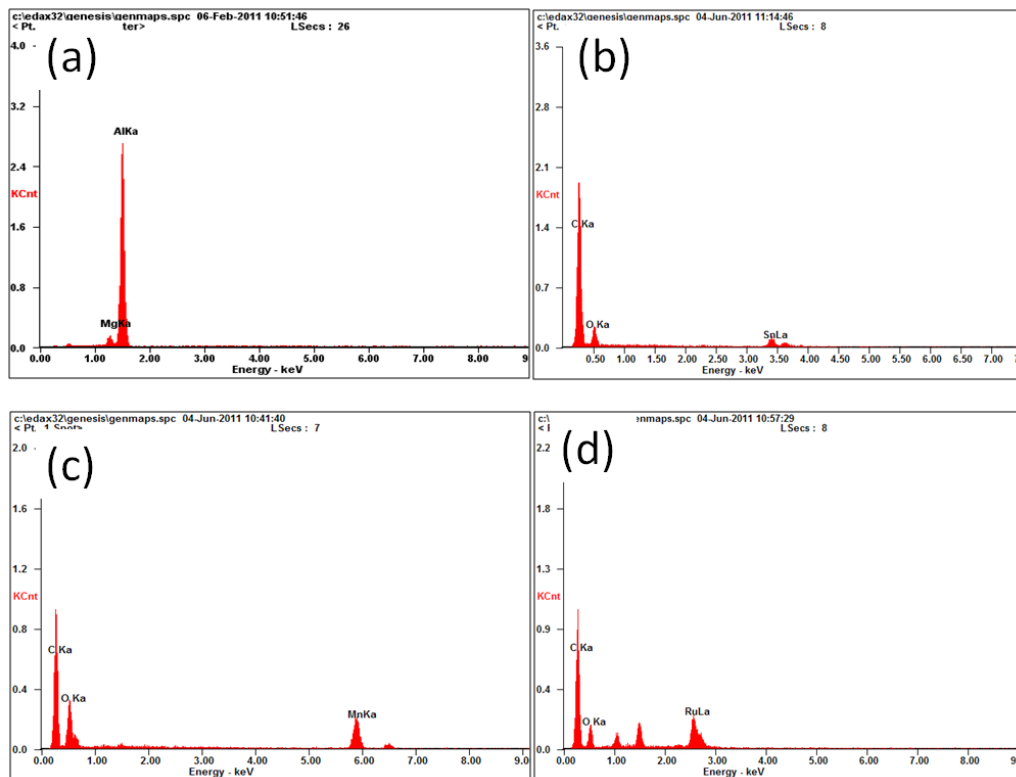


Figure S3 EDAX patterns of (a) sample holder, (b) SnO₂/GNs, (c) MnO₂/GNs and (d) RuO₂/GNs

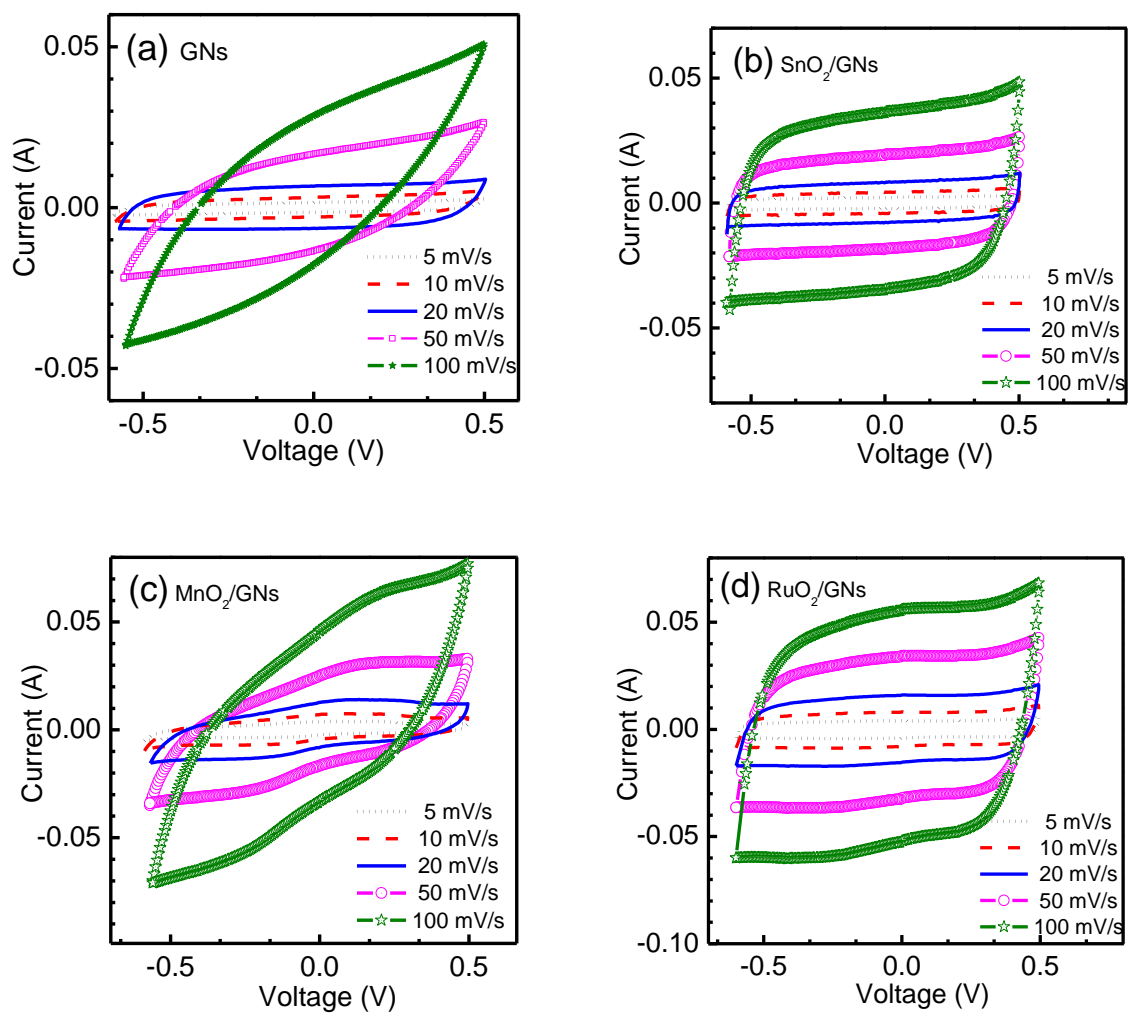


Figure S4 Cyclic voltammograms of (a) GNs¹⁸ (this particular fig. 1(a) alone is already published as reference 18), (b) SnO₂/GNs, (c) MnO₂/GNs and (d) RuO₂/GNs composite based supercapacitor devices with various scan rates in the range of -0.6 to +0.5 V.

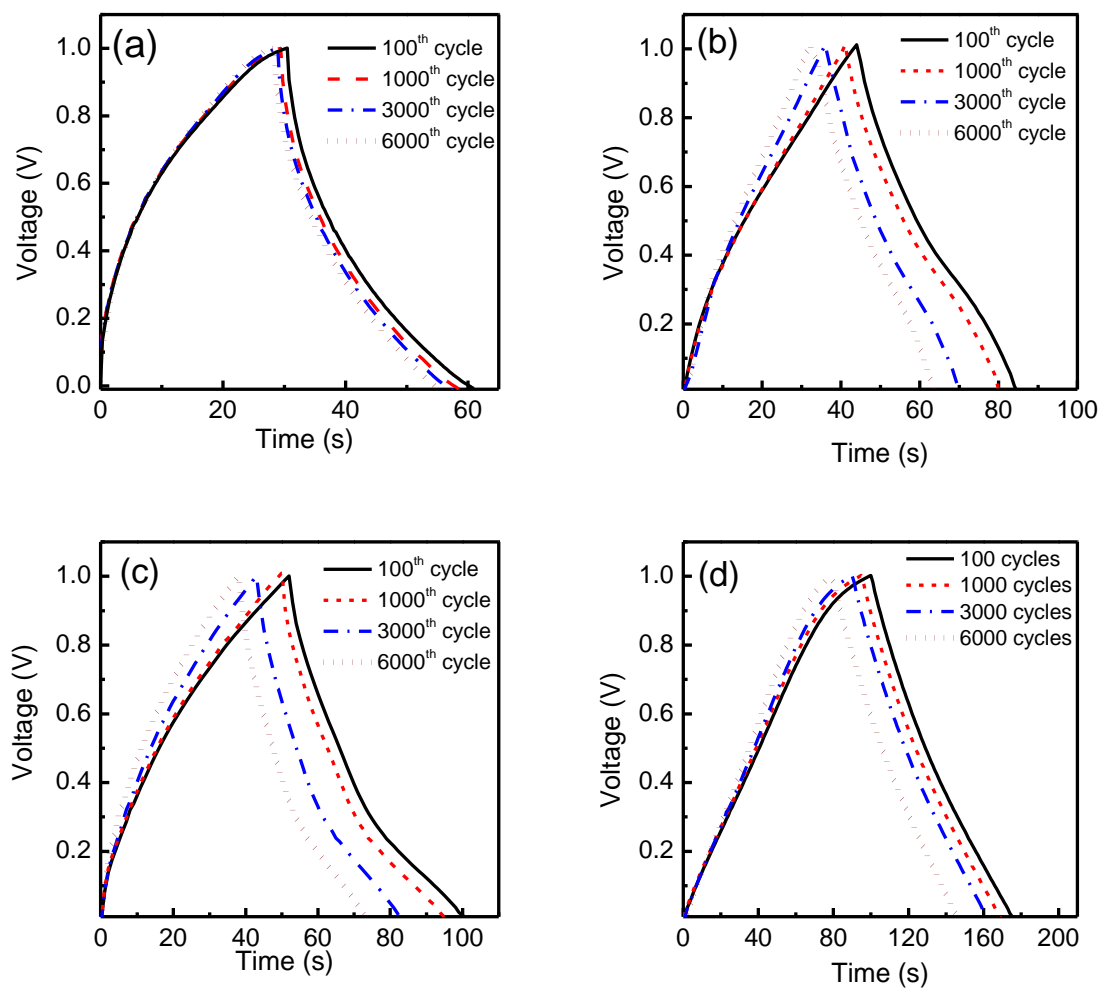


Figure S5 Galvanostatic charge-discharge curves of (a) GNs, (b) SnO₂/GNs, (c) MnO₂/GNs and (d) RuO₂/GNs composite based supercapacitors at a constant current density of 10 mA, in 30 wt% KOH electrolyte recorded at different cycles.