Ternary composites of delaminated-MnO_2/PDDA/functionalized-CNOs for high-capacity supercapacitor electrodes.

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Supplementary Information

Thermogravimetric analysis (TGA). TGA analyses were carried out using a TA Hi-Res TGA 2950. Typically, 3–5 mg of the sample was analyzed with a Hi-Res dynamic ramp (room temperature to 800 °C at 50 °C min-1 with a resolution factor of 4) under constant airflow (60 mL•min-1).

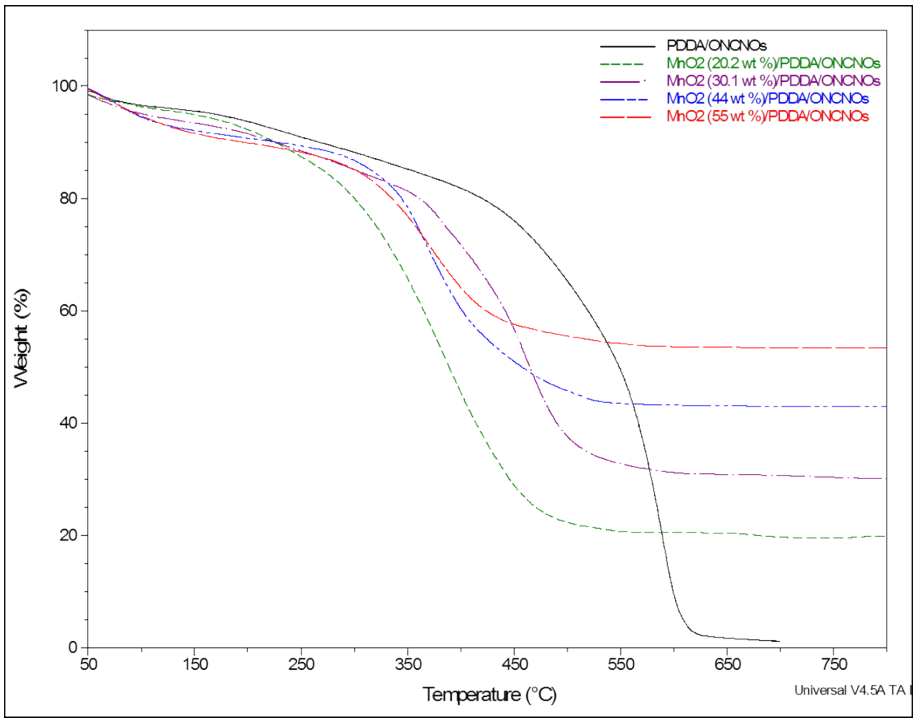

Figure S1. TGA analysis of the PDDA/ONCNOs and MnO_2/PDDA/ONCNOs composites

XRD analysis of the MnO_2 composites' residue (obtained after TGA analysis) shows that MnO_2 converts to Mn_2O_3 under high-temperature analysis in air. So, based on the wt. % of Mn_2O_3 in the residue and stoichiometric calculations, the wt. % of MnO_2 in the initial material was determined.

Rate performance study of MnO_2/PDDA/ONCNOs composites:

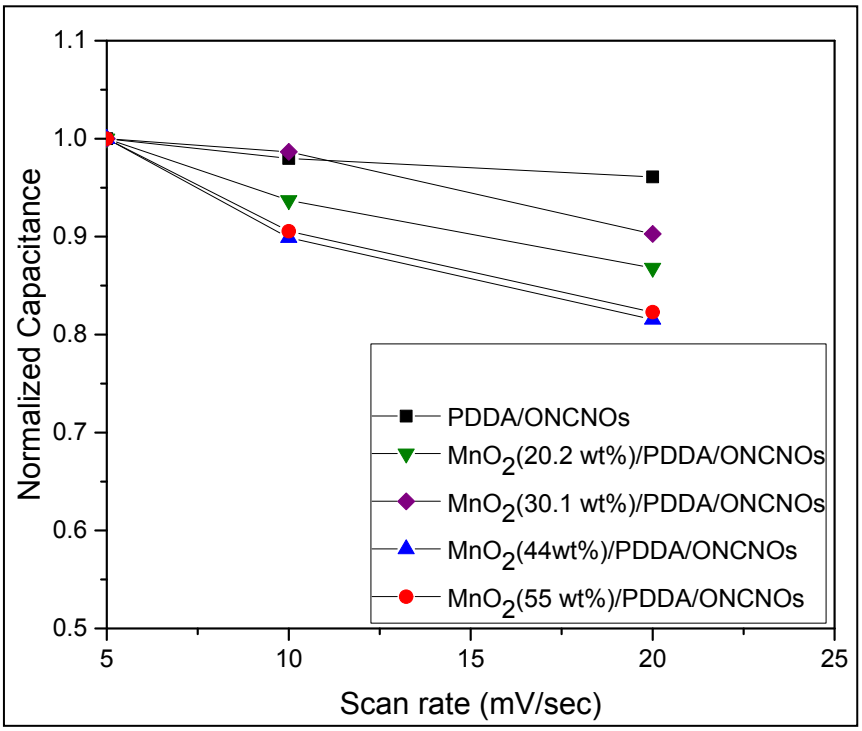

Figure S2. Rate performance of PDDA/ONCNOs and MnO2/PDDA/ONCNOs