Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Ultra high stable supercapacitance performance of conducting polymer coated MnO_2 nanorods/rGO nanocomposites

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Fig. S1:

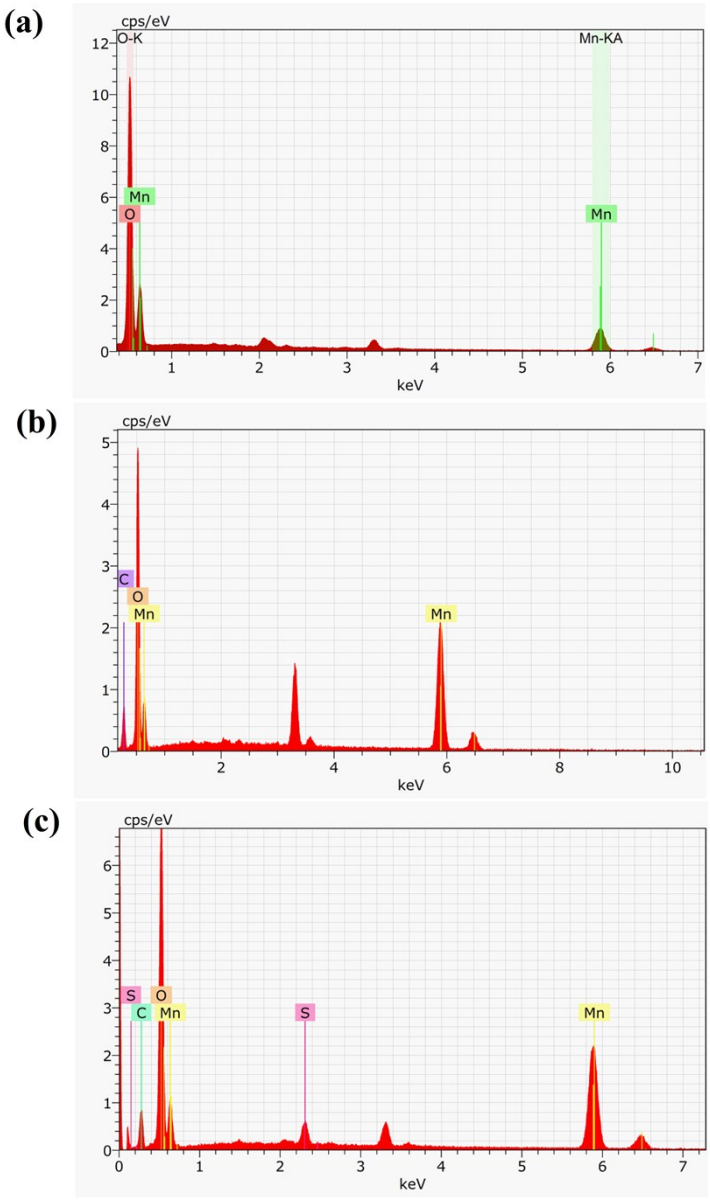

Fig. S1. EDS analysis of (a) MnO_2 nanorods, (b) MG and (c) MGP nanocomposite.

Fig. S2:

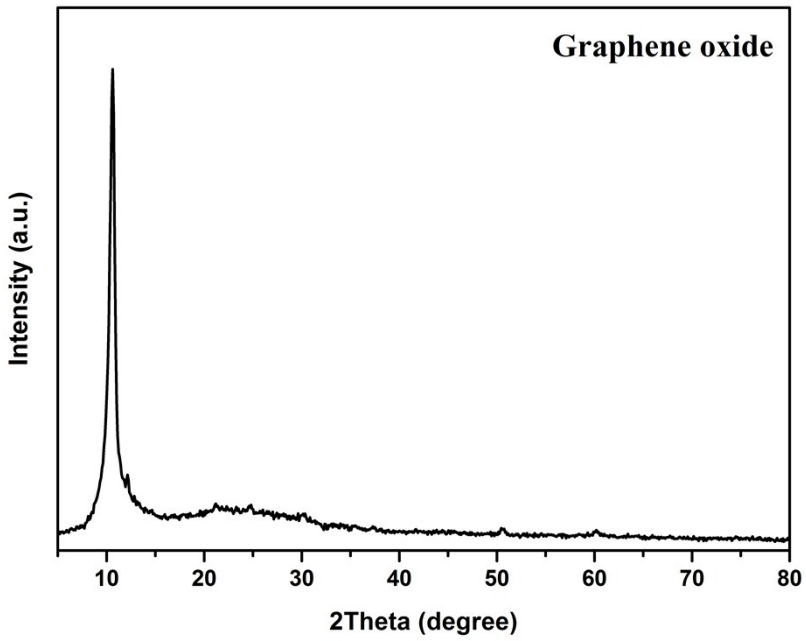

Fig. S2. XRD of graphene oxide.

Fig. S3:

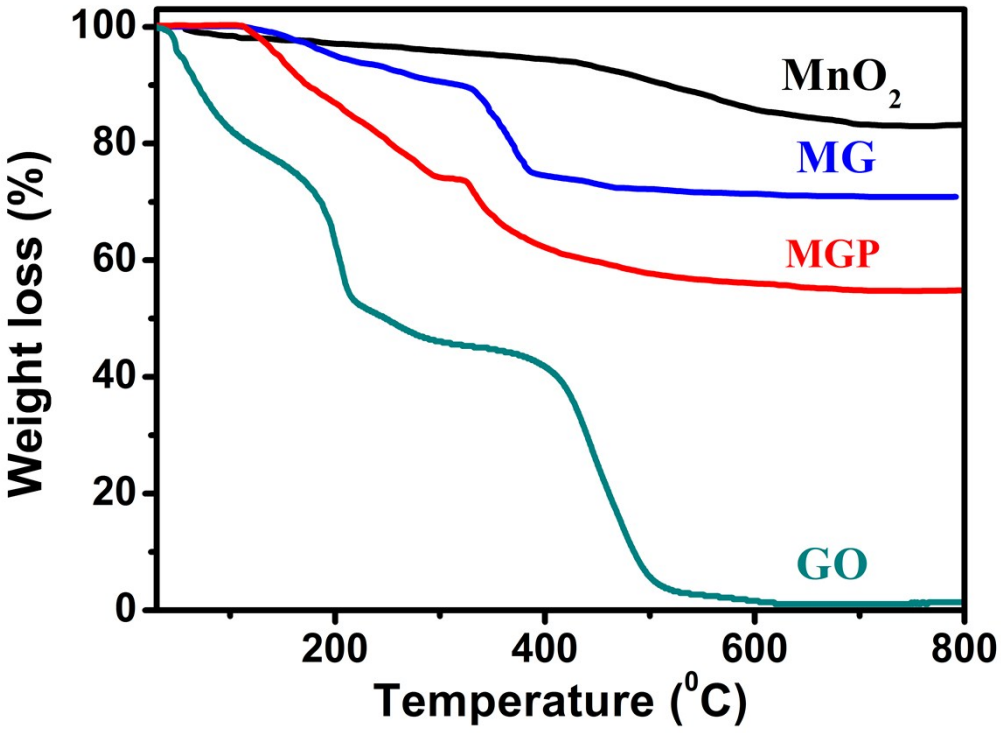

Fig. S3. TGA of GO, MnO_2, MG and MGP nanocomposite.

Fig. S4:

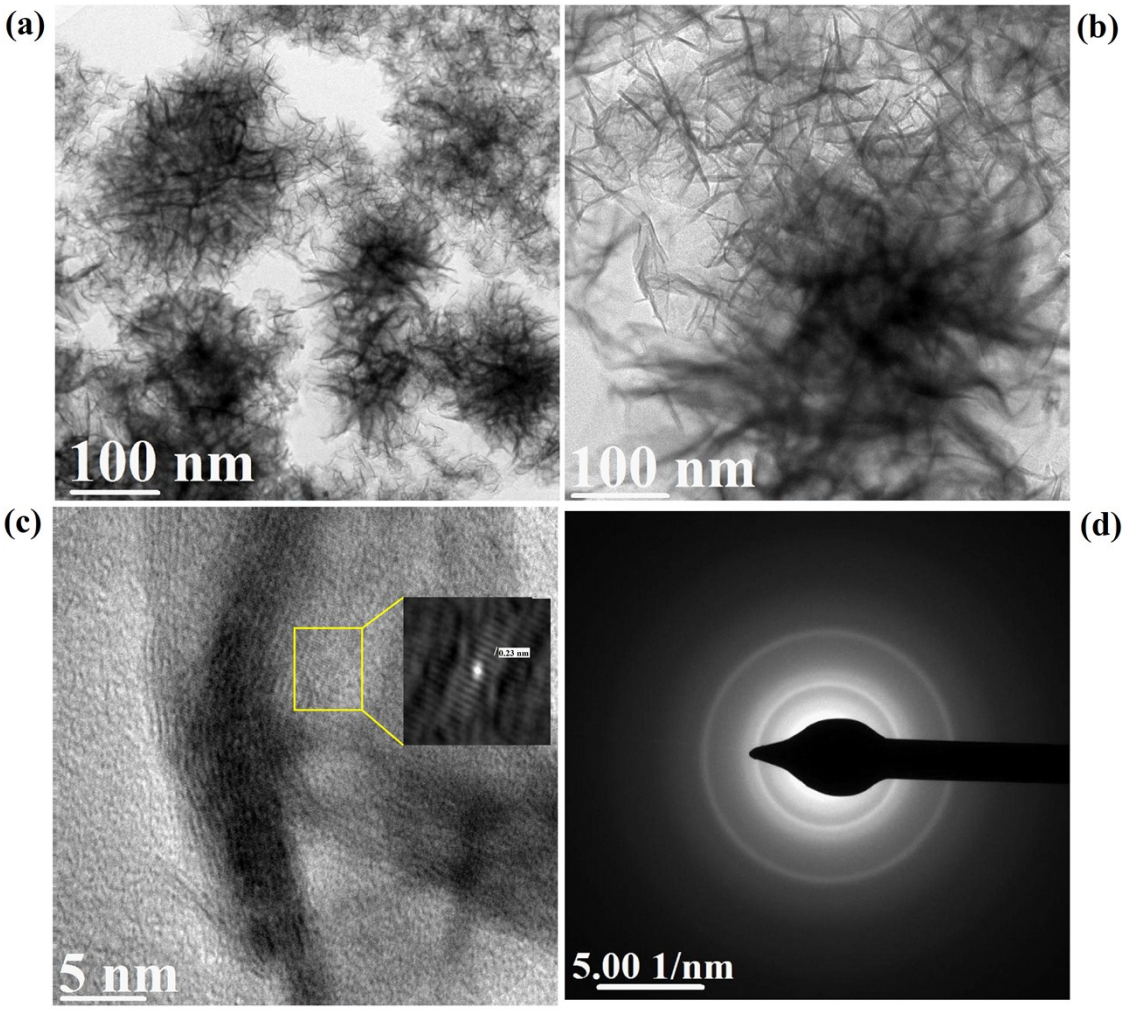

Fig. S4. TEM images of (a) MnO_2-rGO, (b) PEDOT:PSS/MnO_2/rGO, (c) HRTEM images of MnO_2/rGO and (d) SAED pattern for MnO_2/rGO.

Fig. S4 shows the TEM and HRTEM images of MnO_2-rGO and PEDOT:PSS/MnO_2/rGO. As can be seen from Fig. S4 (a), MnO_2 are decorated on rGO as flower like structure which is also supported by FESEM analysis. A thin coating of PEDOT:PSS polymer on this MnO_2/rGO nanostructure can be seen in Fig. S4 (b). The HRTEM image of MnO_2/rGO nanocomposite is shown in Fig S4 (c) and it shows the interlayer spacing as 0.23 nm, corresponding to (211) plane of MnO_2, which is in agreement with XRD results. The SAED pattern (Fig. S4 (d) reveals that the prepared MnO_2/rGO is polycrystalline in nature.