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Supporting information

Surface modification of MnO_2 and carbon nanotubes using organic dyes for nanotechnology of electrochemical supercapacitors.

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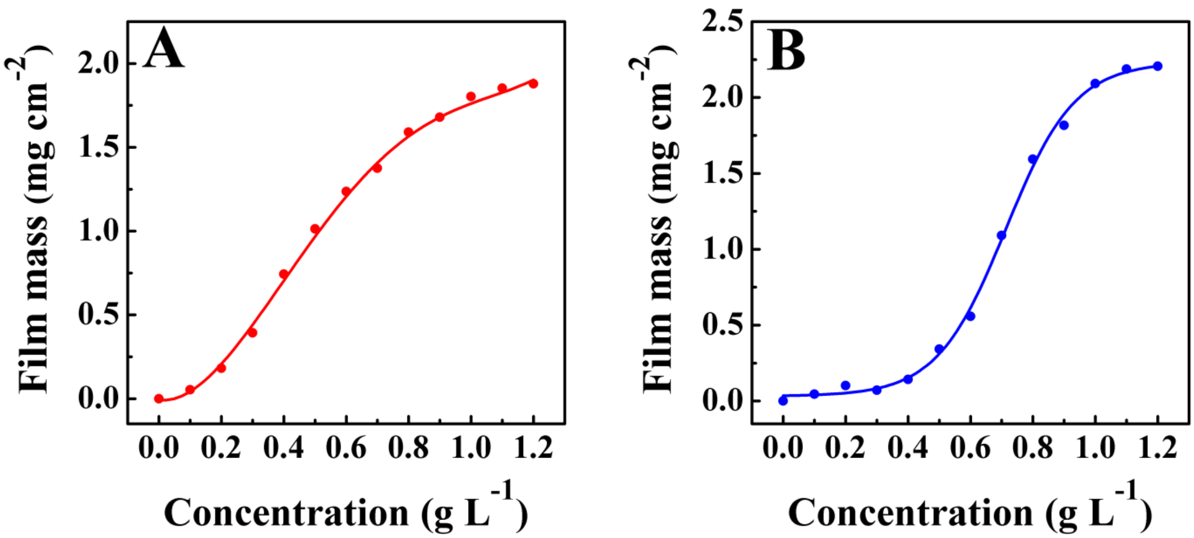

Fig.S1 Film mass for anodic deposits versus (A) PV and (B) CP concentration in 2.4 g L^{-1} MWCNT suspensions at a deposition voltage of 100 V and a deposition time of 2 min.

The data indicated that the deposition yield of MWCNT from 2.4 g L^{-1} MWCNT suspensions was higher than that for 1.2 g L^{-1} MWCNT suspensions (Figure 1A-B) at PV and CP concentrations of 1.2 g L^{-1}. The result is in agreement with Hamaker equation (O. O. Van der Biest and L. J. Vandeperre, *Annual Review of Materials Science*, 1999, **29**, 327), describing the deposition yield dependence on particle concentration in the suspensions.

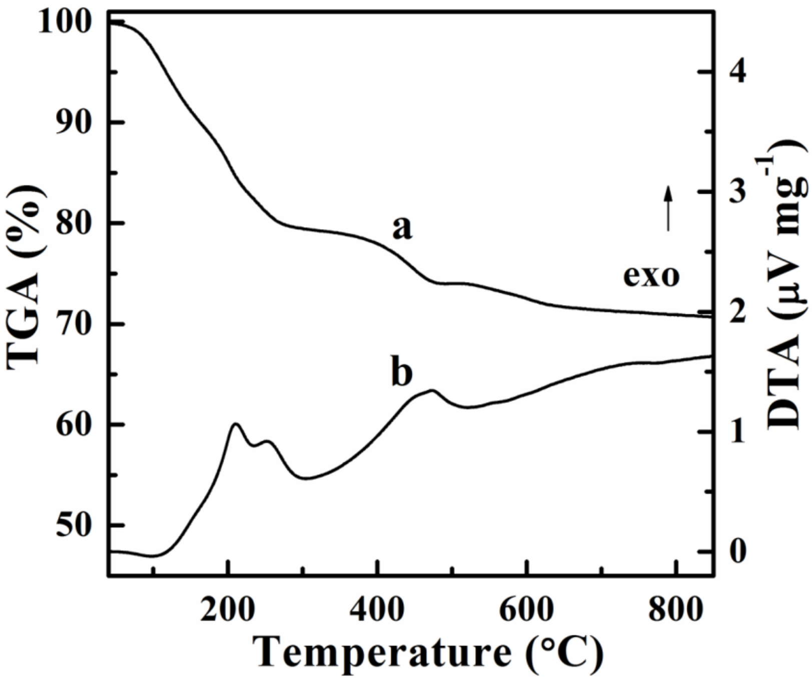

Fig.S2 (a)TGA and (b)DTA data for the film prepared from suspension, containing 9 g L^{-1} MnO_2, 1.2 g L^{-1} PV and 1.2 g L^{-1} MWCNT.

The additional mass loss in the TGA data and exothermic peaks in the corresponding DTA data (Fig.S2) compared to pure MnO_2 (Fig.6D(a,c)) are related to burning out of MWCNT and indicate the formation of composite MnO_2 - MWCNT film.

This data coupled with the data for the another composite (Fig.6D(b,d)) indicated that composite films can be prepared from different suspensions.