Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A

Supplementary Information

$MnCO_3$: a novel electrode material for supercapacitors

S. Devaraj[a,b,*], H. Y. Liu[c] and P. Balaya[a,c,*]

[a]*Department of Mechanical Engineering, National University of Singapore, Singapore 117576*

[b]*School of Chemical and Biotechnology, SASTRA University, Thanjavur 613401, India*

[c]*Engineering Science Programme, National University of Singapore, Singapore 117576*

**Email: devaraj@scbt.sastra.edu; mpepb@nus.edu.sg*

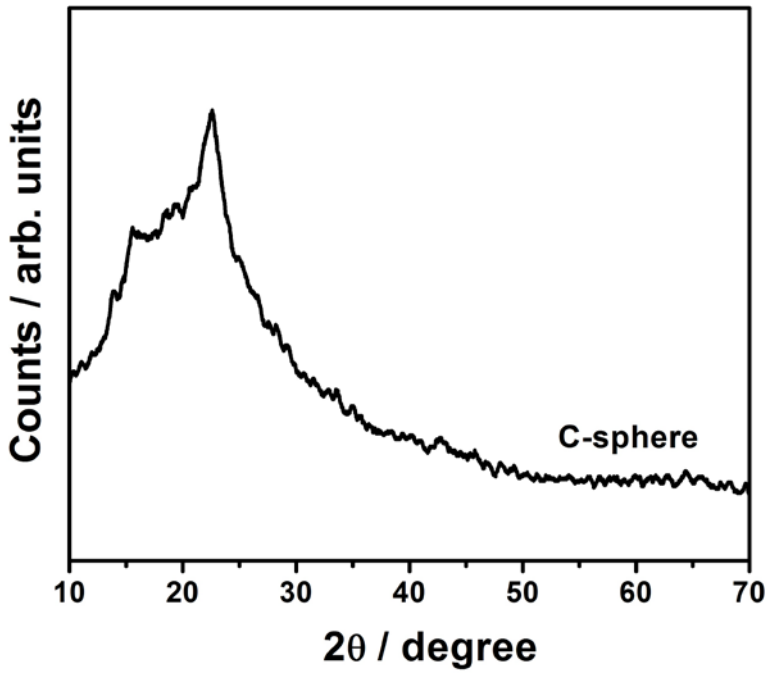

Fig. S1 Powder X-ray diffraction pattern of carbon sphere.

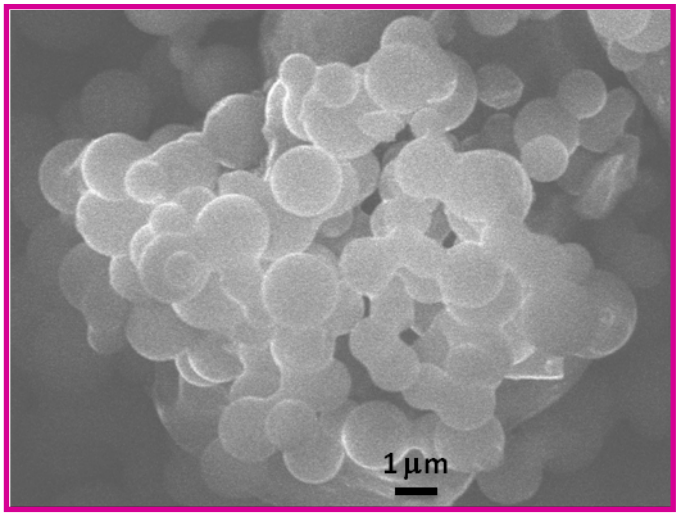

Fig. S2 FESEM image of carbon sphere.

Fig. S3 Photographic images of carbon sphere and $MnCO_3$ showing difference in their colour. Carbon sphere is black whereas $MnCO_3$ is brownish yellow.

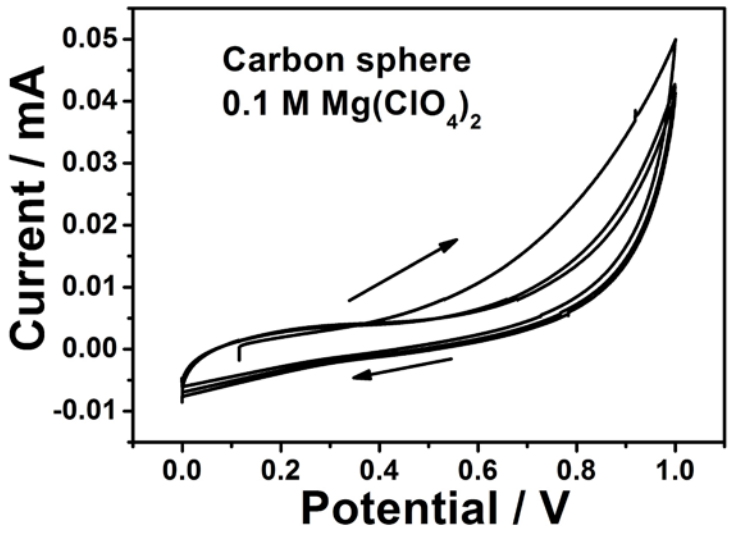

Fig. S4 Cyclic voltammogram of carbon sphere in 0.1 M $Mg(ClO_4)_2$ recorded at a scan rate of 5 mV/s.

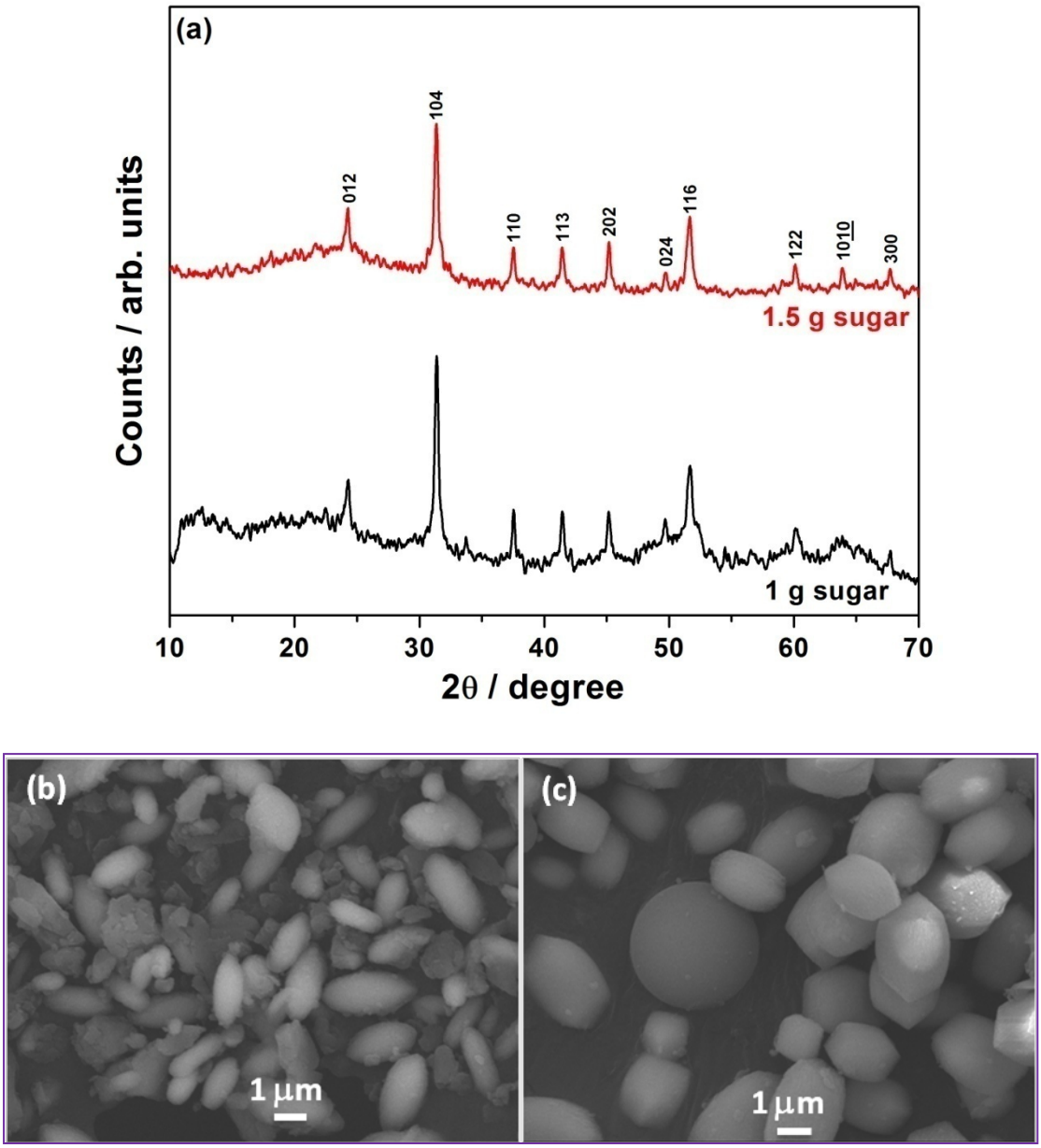

Fig. S5 (a) Powder X-ray diffraction pattern of MnC1.0 and MnC1.5. (b) and (c) FESEM images of MnC1.0 and MnC1.5, respectively.

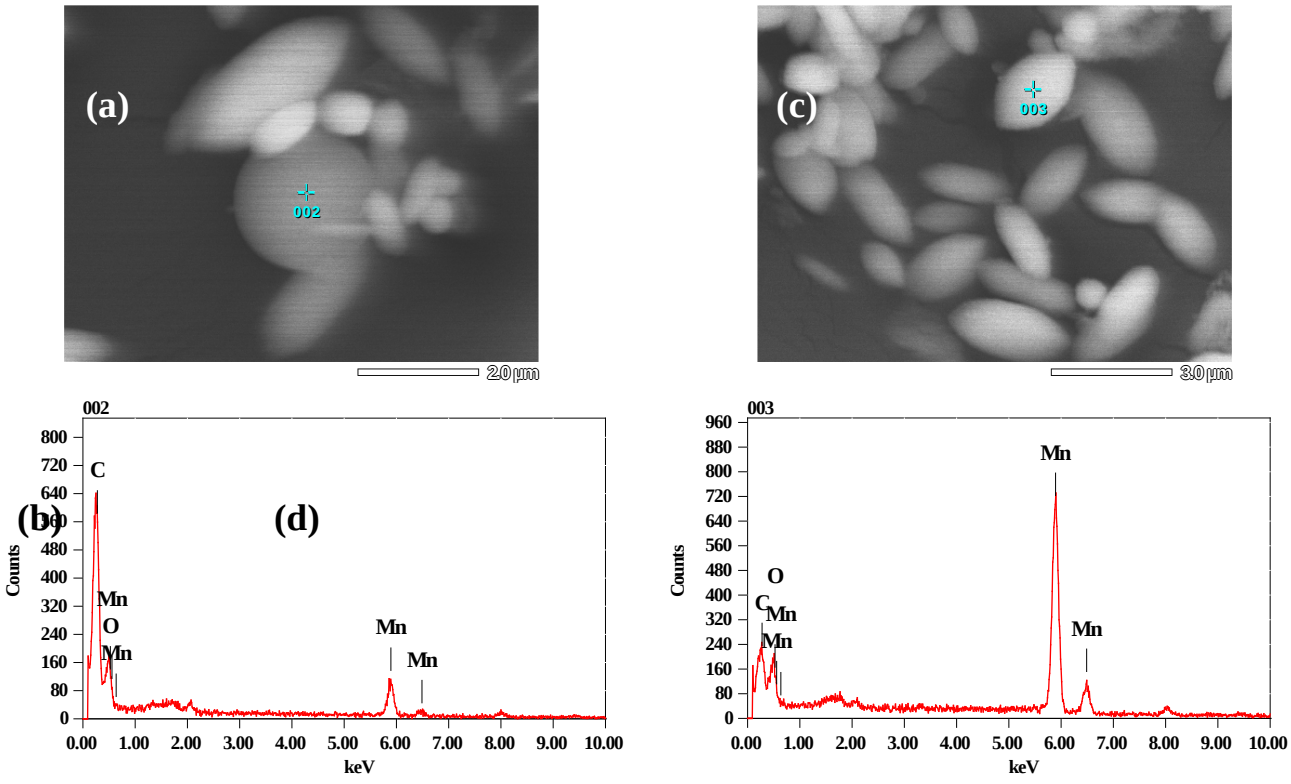

Fig. S6 (a) SEM image of MnC1.5 with spot on sphere and (b) its corresponding EDS showing majorly carbon signature. (c) SEM image of MnC1.5 with spot on rice-like morphology and (d) its corresponding EDS showing $MnCO_3$ signature.