Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Supporting information

A nanosized Fe_2O_3 decorated single-walled carbon nanotube membrane as a high-performance flexible anode for lithium ion batteries

Guangmin Zhou[a], Da-Wei Wang[b], Peng-Xiang Hou[a], Wenshan Li[a], Na Li[a], Chang Liu[a], Feng Li[a]*, and Hui-Ming Cheng[a]

[a]Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, 72 Wenhua Road, Shenyang 110016, China

[b]ARC Centre of Excellence for Functional Nanomaterials, AIBN, School of Chemistry and Molecular Biosciences, The University of Queensland, Brisbane, Qld 4072, Australia

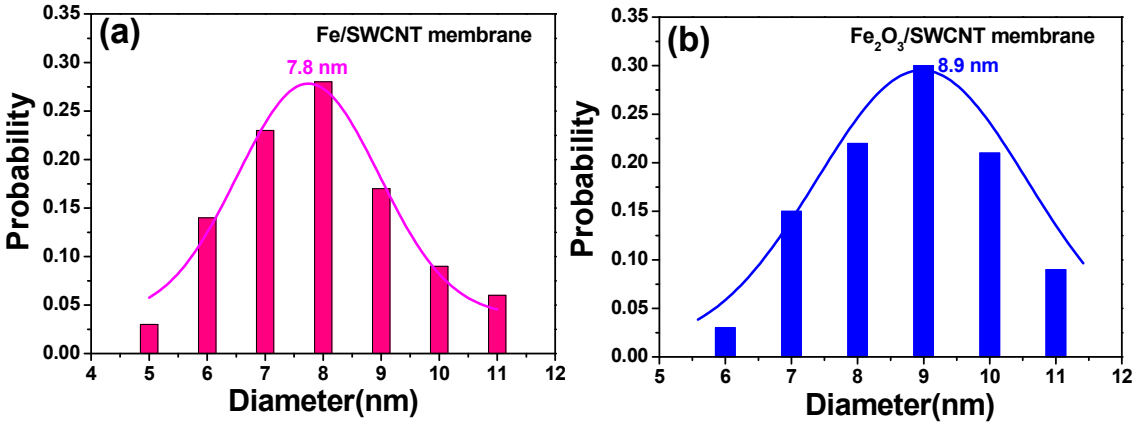

Fig. S1 (a) Size distributions of the Fe NPs in an Fe/SWCNT membrane. (b) Size distributions of the Fe_2O_3 NPs in an Fe_2O_3/SWCNT membrane.

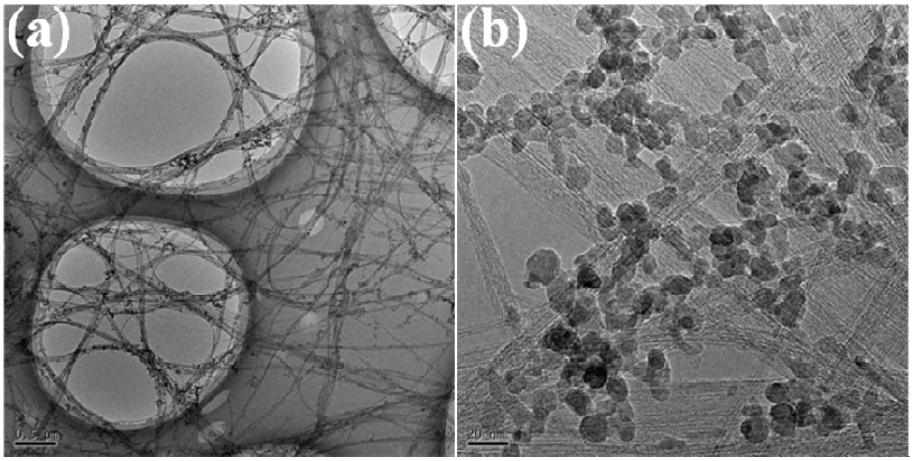

Fig. S2 (a) Low-magnification and (b) high-magnification TEM images of an Fe_2O_3/SWCNT membrane after strong ultrasonication for 2 h in ethanol.

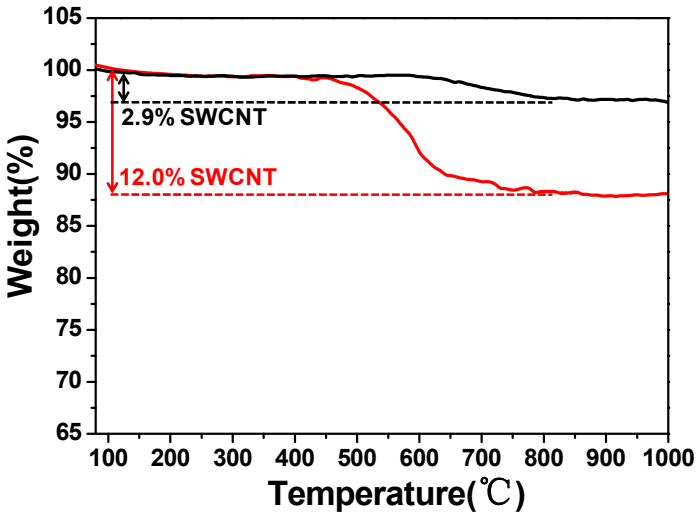

Fig. S3 Thermogravimetric curves of the Fe_2O_3/SWCNT membrane in air with a heating rate of 10 ºC min^{-1}, showing the Fe_2O_3 content of 88.0 and 97.1 wt%.

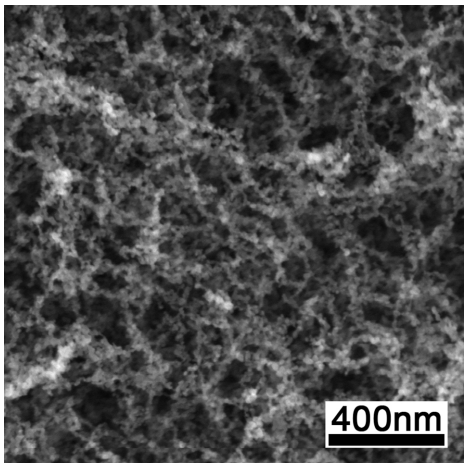

Fig. S4 SEM image of an Fe_2O_3/SWCNT membrane containing 97.1 wt% of Fe_2O_3.