Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Highly conductive triple-layered hollow MnO_2@SnO_2@NHCS nanospheres with excellent lithium storage for high performance lithium-ion batteries

Yameng Mei,[a] Jin'an Zhao,*[ab] Liyun Dang,*[c] Jiyong Hu,[c] Yan Guo,[c] and Shuaiguo Zhang, [c]

[a] College of Chemistry, Zhengzhou University, Zhengzhou 450001

[b] College of Chemical Engineering and Dyeing Engineering, Henan University of Engineering, Zhengzhou 450001, *E-mail:zjinan@zzu.edu.cn

[c] School of Material and Chemical Engineering, Henan University of Urban Construction, Pingdingshan 467036, *E-mail:20161010@hncj.edu.cn

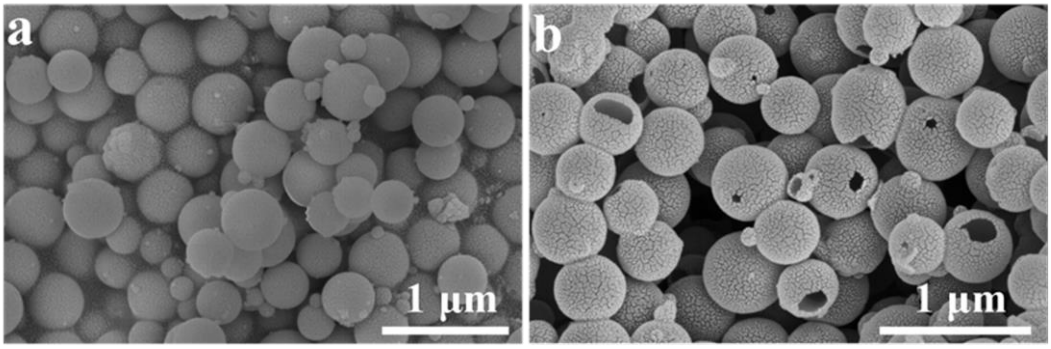

Fig. S1 FESEM images of (a) SiO_2 templates and (b) NHCS nanospheres.

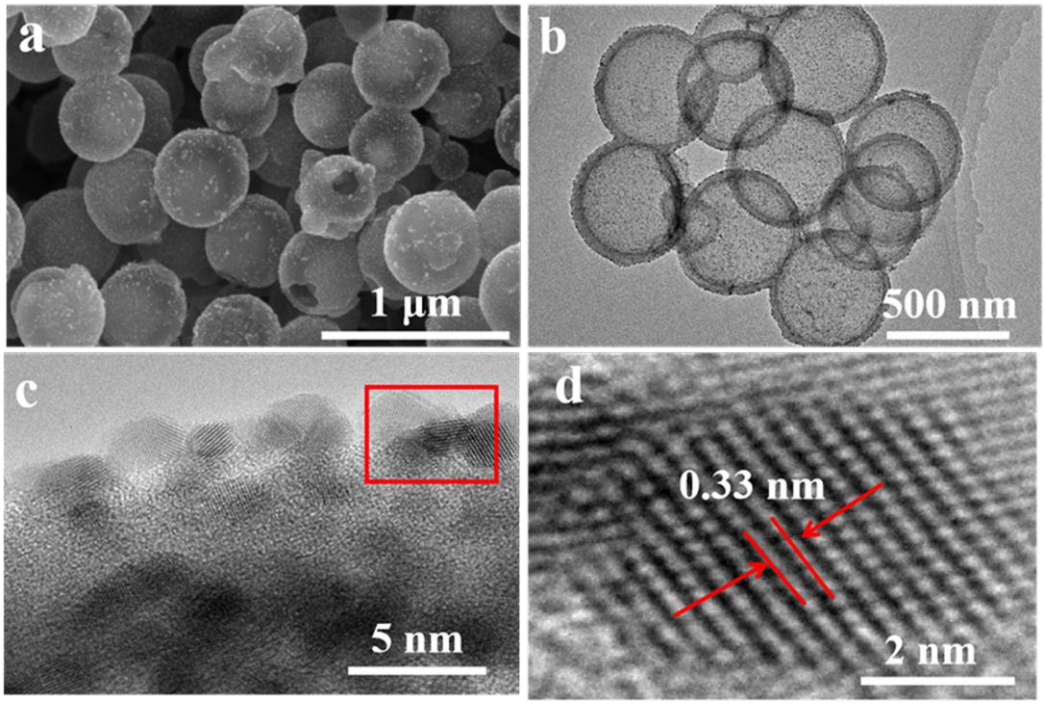

Fig. S2 FESEM(a), TEM(b) and HRTEM(c, d) images of SnO_2@NHCS.

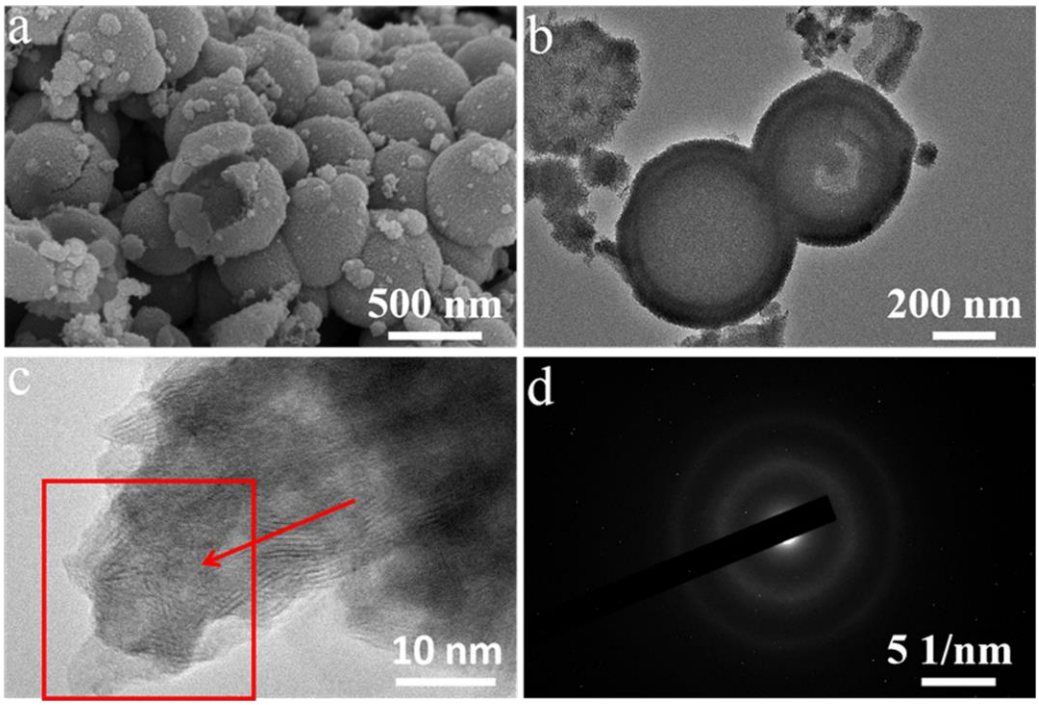

Fig. S3 FESEM(a), TEM(b), HRTEM(c) and SAED(d) images of MnO_2@NHCS.

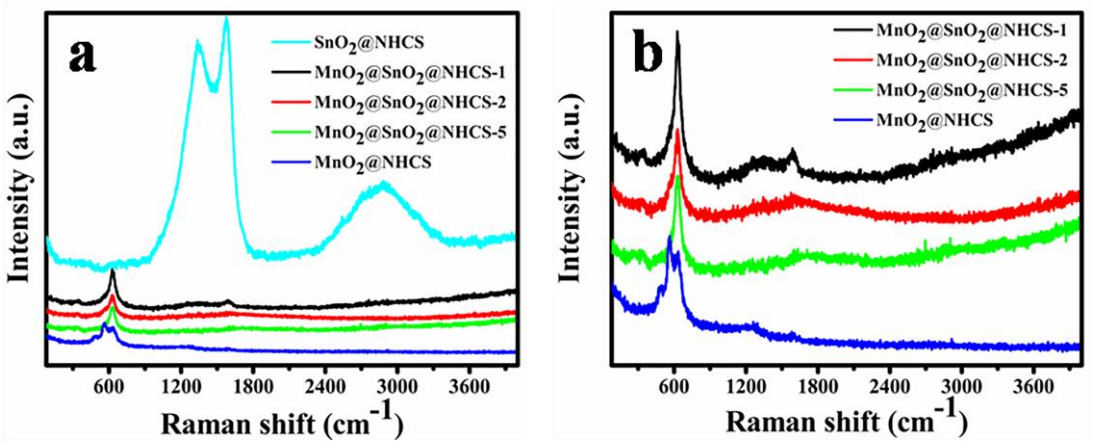

Fig. S4 Raman Spectra of SnO_2@NHCS, MnO_2@SnO_2@NHCS-1, MnO_2@SnO_2@NHCS-2, MnO_2@SnO_2@NHCS-5, and MnO_2 @NHCS

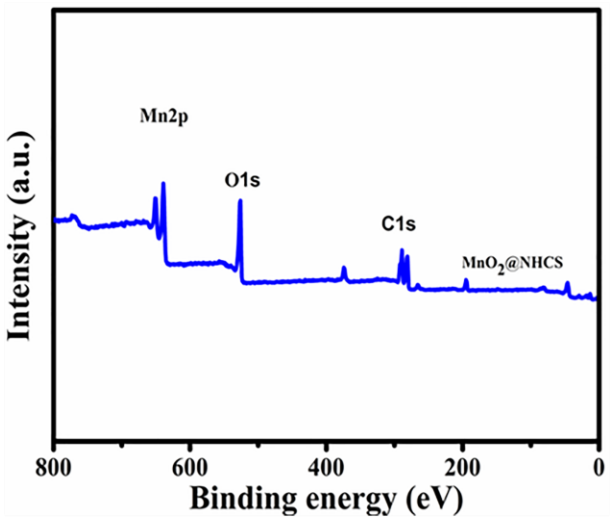

Fig. S5 XPS spectra of MnO_2@NHCS.

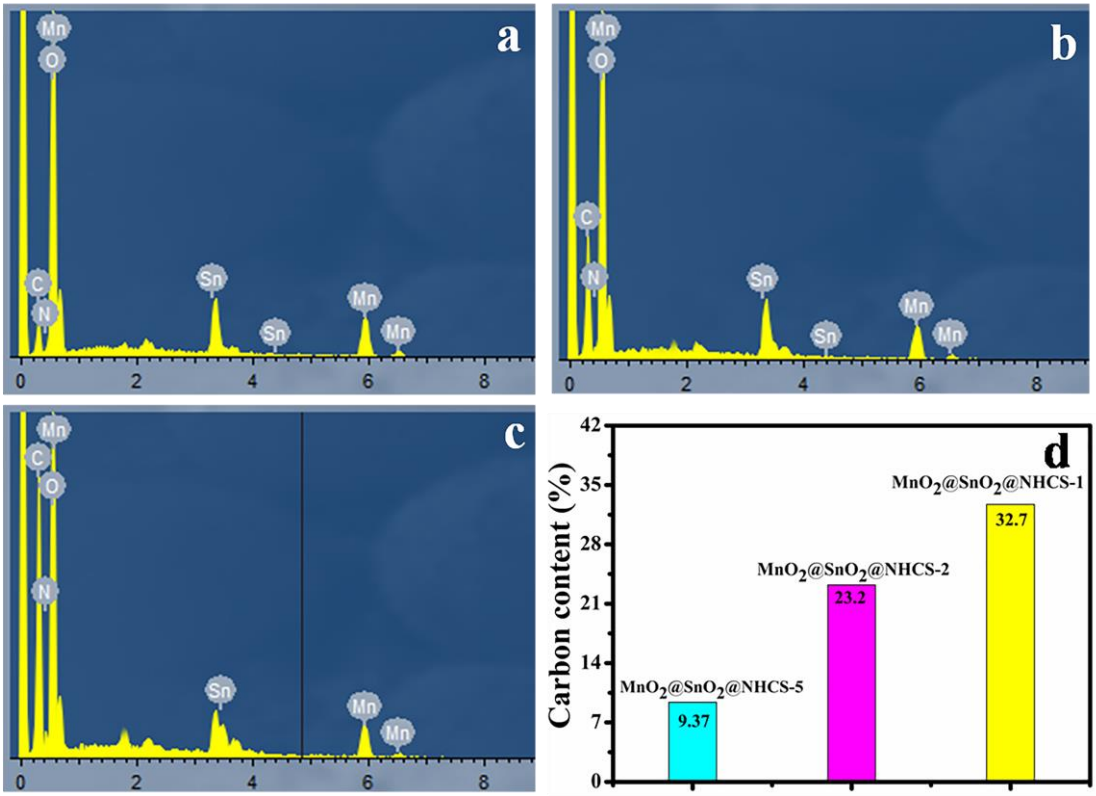

Fig. S6 EDX point spectra of (a) MnO_2@SnO_2@NHCS-5, (b) MnO_2@SnO_2@NHCS-2, (c) MnO_2@SnO_2@NHCS-1 and (d) carbon content of MnO_2@SnO_2@NHCS-5, MnO_2@SnO_2@NHCS-2, MnO_2@SnO_2@NHCS-1

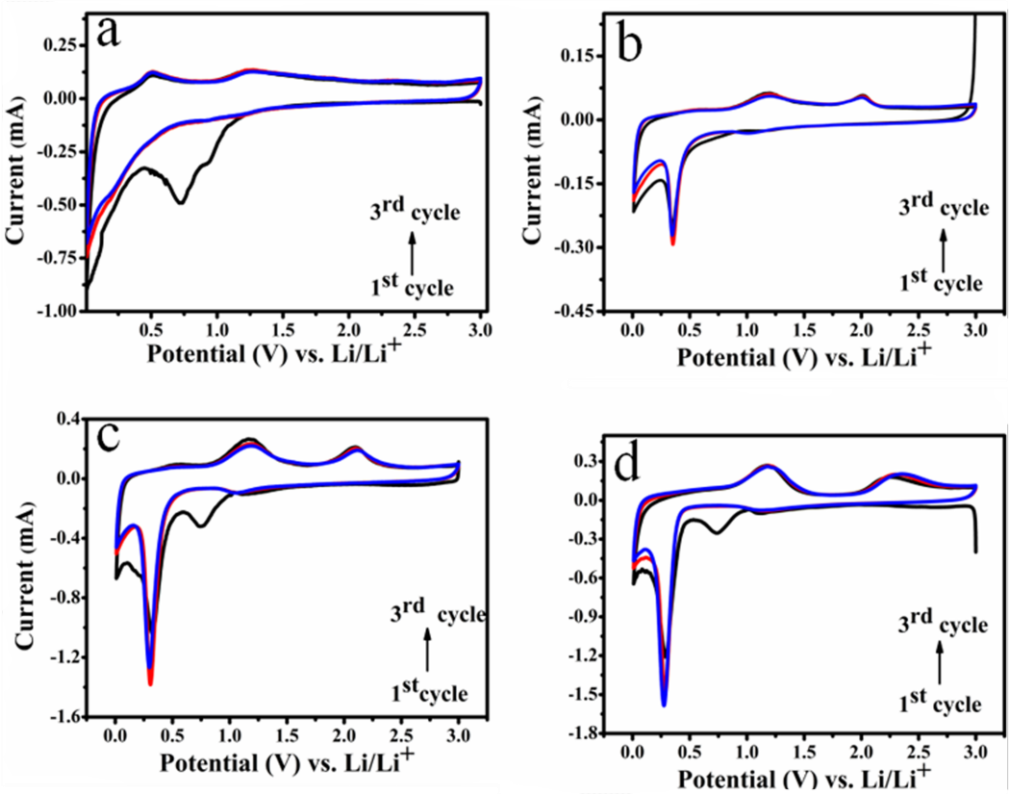

Fig. S7 CV curves of the (a) SnO_2@NHCS, (b) MnO_2@SnO_2@NHCS-1, (c) MnO_2@SnO_2@NHCS-2, (d) MnO_2@NHCS.

Table S1. Comparison of the electrochemical properties of the prepared MnO_2@SnO_2@NHCS-5 with previously reported anode materials for LIBs.

Materials	Current density (mAg^{-1})	Cycle numbers	Capacity ($mAhg^{-1}$)	References
MnO_2@SnO_2@NHCS-5	**100**	**100**	**1053.8**	**This work**
SnO_2@C@VO_2 CHNS	100	100	765.1	1
α-Fe_2O_3/MnO_2	100	150	860	2
CF@MnO_2	100	150	648	3
Fe_2O_3/Co_3O_4	100	50	500	4
SnO_2-C	100	30	492.5	5
δ-MnO_2	1000	100	320	6
C/MnO	100	100	943.6	7
N-MnO/GNS	100	90	772	8

References

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