Supporting Information

MOF-Derived ZnS/NC yolk-shell Composites for Highly Reversible Lithium Storage

Ping Wang, a,b Yan Jiang, a,b Yuanyuan Cao, a,b Xiaojuan Wu, a,b and Xiang Liu a,b

a Institute of Medicine & Chemical Engineering, Zhenjiang College, Zhenjiang 212028, P. R. China

b Zhenjiang Key Laboratory of Functional Chemistry, Institute of Chemistry & Materials Science, Zhenjiang College, Zhenjiang 212028, P.R. China

Corresponding Authors E-mail: liuxiang0222@126.com (X. Liu)
Fig. S1 EDS results of ZnS@NC.

Fig. S2 TG curve of ZnS@NC.

Fig. S3 N$_2$ adsorption-desorption isotherm (77K) of ZnS/NC.
Fig. S4 SEM images of samples. (a) ZIF-8, (b) ZnS@ZIF-8. TEM images of samples. (c) ZIF-8, (d) ZnS@ZIF-8.
Fig. S5 SEM image of (a) ZnS(48 h)@ZIF-8, (c) ZnS(72 h)@ZIF-8, (e) ZnS(48 h)/NC, (g) ZnS(72 h)/NC.

TEM images of (b) ZnS(48 h)@ZIF-8, (d) ZnS(72 h)@ZIF-8, (f) ZnS(48 h)/NC, (h) ZnS(72 h)/NC.

XRD patterns of (i) ZnS(48 h)@ZIF-8, ZnS(72 h)@ZIF-8 and ZIF-8. (j) ZnS(48 h)/NC, ZnS(72 h)/NC and ZnS(24 h)/NC.
Fig. S6 The size distribution diagram of ZnS particles

Fig. S7 Impedance spectrum of ZnS/NC