Electronic Supplementary Information (ESI)
Formation of Yolk-shell Structured NiO Nanospheres with Enhanced Lithium Storage Capacity

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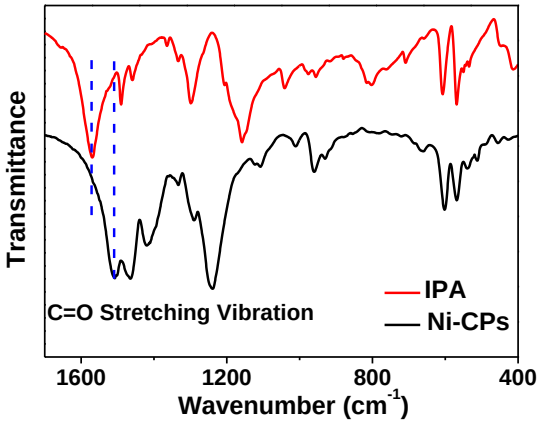

Fig.S1 FTIR spectra of Ni-CPs and isophthalic acid (IPA).

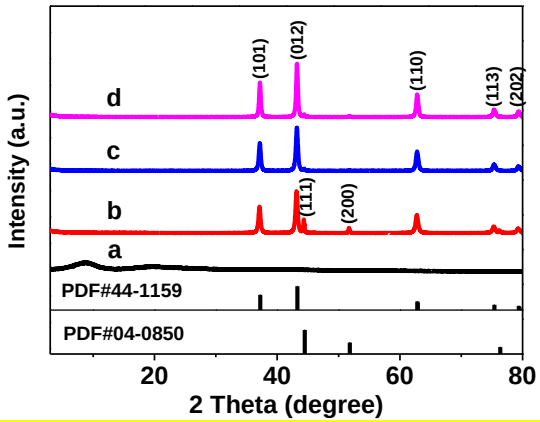

Fig.S2 XRD patterns for (a) Ni-CPs, (b) NiO-10, (c) NiO-60 and (d) NiO-360.

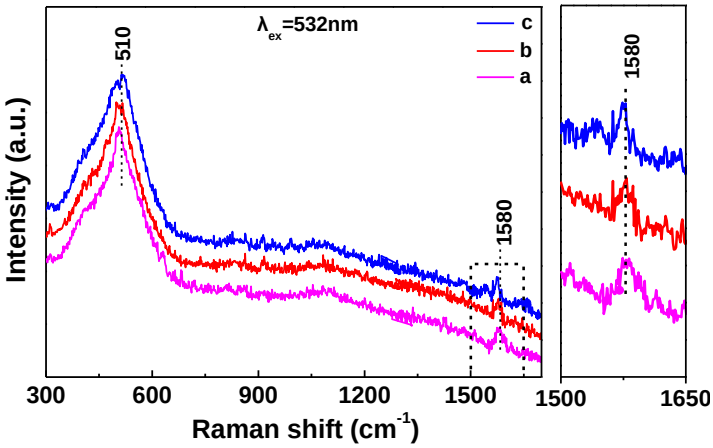

Fig.S3 Raman spectra of (a) NiO-10, (b) NiO-60 and (c) NiO-360.

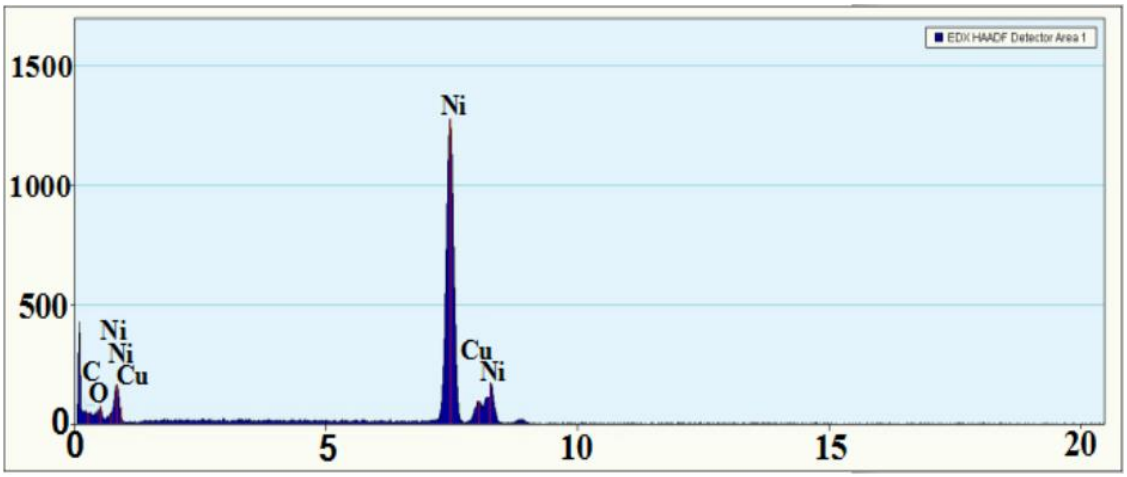

Fig.S4 HRTEM-EDS image of yolk-shell NiO-30.

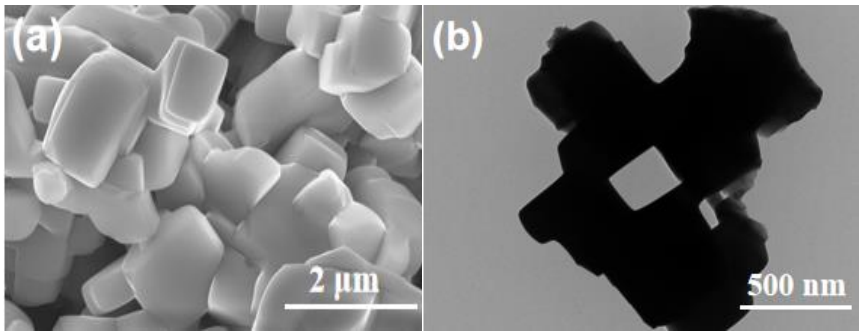

Fig.S5 SEM image and TEM image of commercial NiO.

Table S1 Specific surface area and average pore diameter of all NiO samples.

Sample	Specificsurfacearea (m^2/g)	Average pore size (nm)
NiO-10	22	10
NiO-30	18	13
NiO-60	13	17
NiO-360	9	19

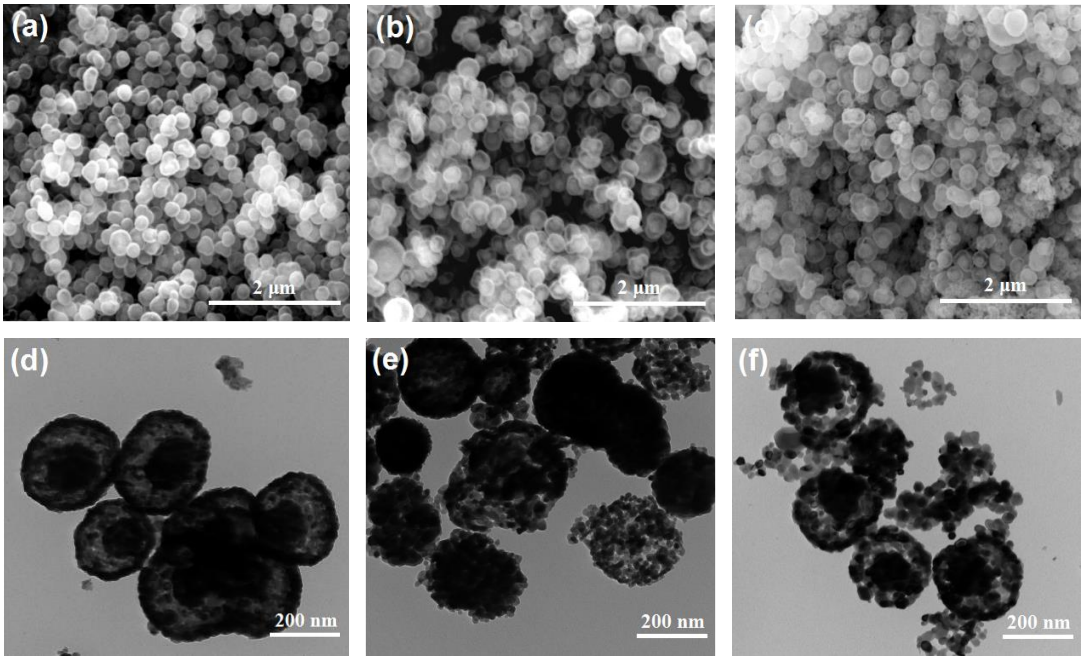

Fig.S6 SEM images and TEM images of the Ni-CPs calcinated at the temperature of 500 ^{o}C for different time:(a, d) NiO-10, (b, e) NiO-60, (c, f) NiO-360.

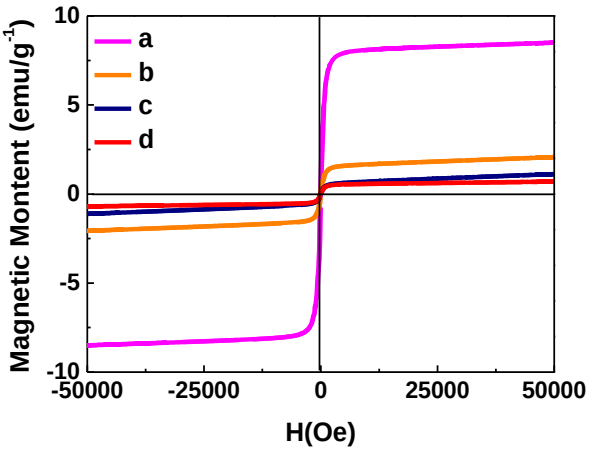

Fig.S7 Magnetization (M) versus magnetic field (H) of the Ni-CPs calcinated at the temperature of 500 ^{o}C for different time at 300 K: (a) NiO-10, (b) NiO-30, (c) NiO-60 and (d) NiO-360.

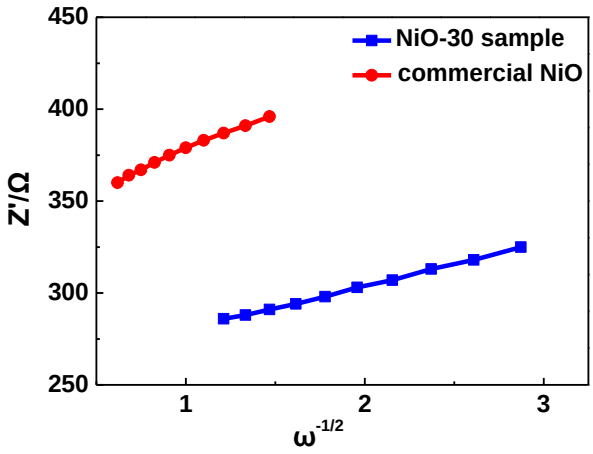

Fig.S8 The lines of Z'-$\omega^{-1/2}$ of NiO-30 and commercial NiO.

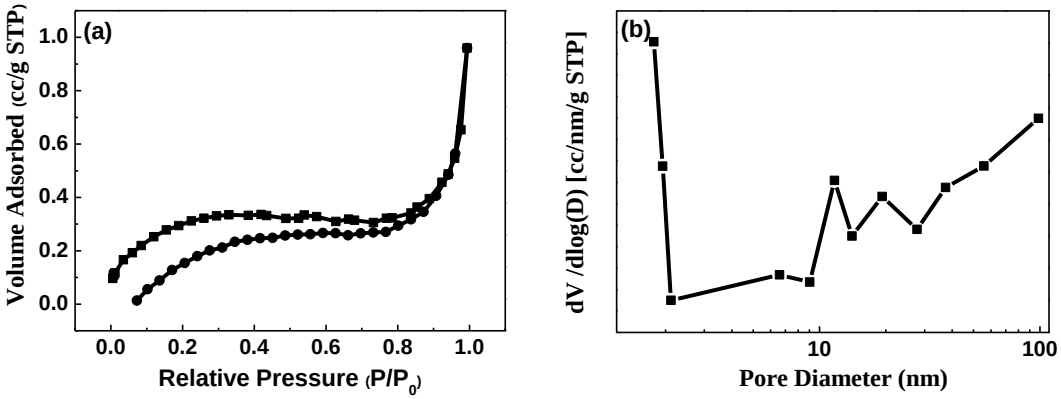

Fig.S9 (a) N_2 adsorption-desorption isotherms and (b) the pore size distribution curves of commercial NiO.