

Supporting Information

Mn₃O₄ Hollow Spheres for Lithium-ion Batteries with High Rate and Capacity

Guoqiang Jian,^{‡a} Yunhua Xu,^{‡b} Li-Chung Lai,^c Chunsheng Wang^{*b} and Michael R. Zachariah^{*ab}

^a Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742, USA. E-mail: mrz@umd.edu

^b Department of Chemical and Biomolecular Engineering, University of Maryland, College Park, MD 20742, USA. E-mail: cswang@umd.edu

^c NISP Laboratory, Nanocenter, University of Maryland, College Park, MD 20742, USA

[‡]These authors contributed equally to this work.

S1. Enlarged image of inset SAED image shown in Figure 2a.

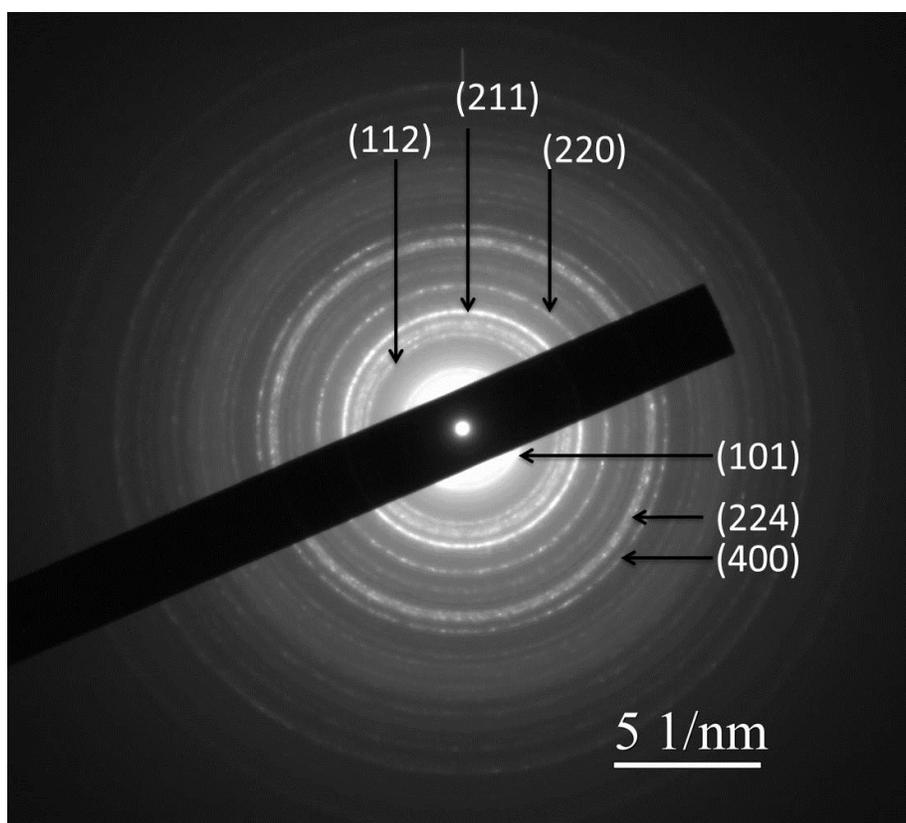


Figure S1. Enlarged SAED image of as collected hollow Mn₃O₄ spheres. Note: The same as inset image shown in Figure 2a.

S2. SEM image of synthesized hollow Mn_3O_4 spheres.

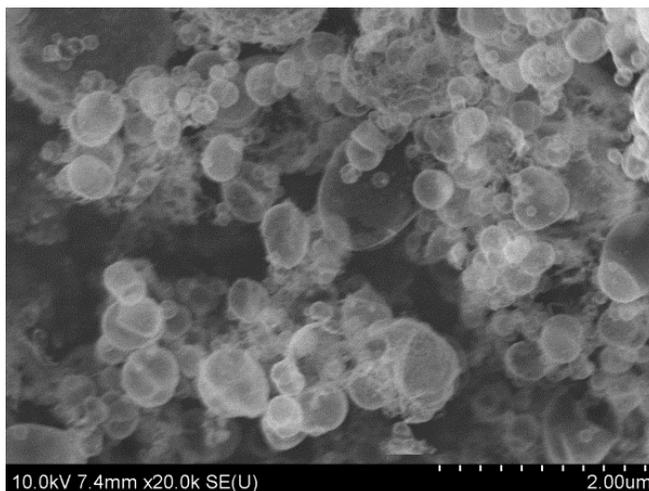


Figure S2. SEM image of synthesized hollow Mn_3O_4 spheres.

S3. N_2 adsorption/desorption isotherm curve and pore size distribution of hollow Mn_3O_4 spheres.

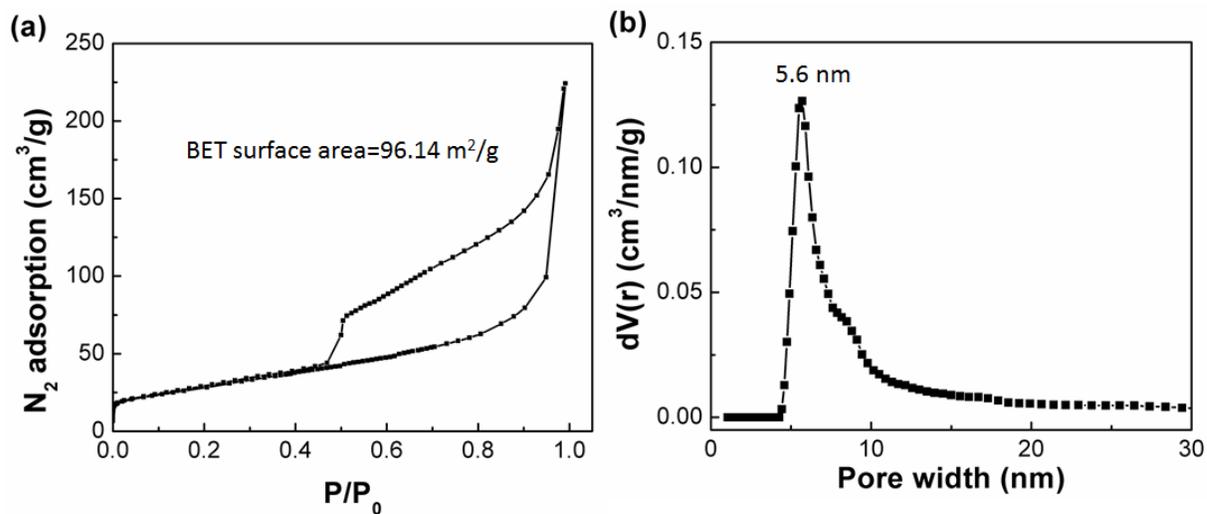


Figure S3. (a) N_2 isothermal curves, and (b) NLDFT pore size distribution curve of hollow Mn_3O_4 spheres. Note: NLDFT means non-local density functional theory.

S4. TEM images of hollow Mn_3O_4 spheres after charging/discharging process.

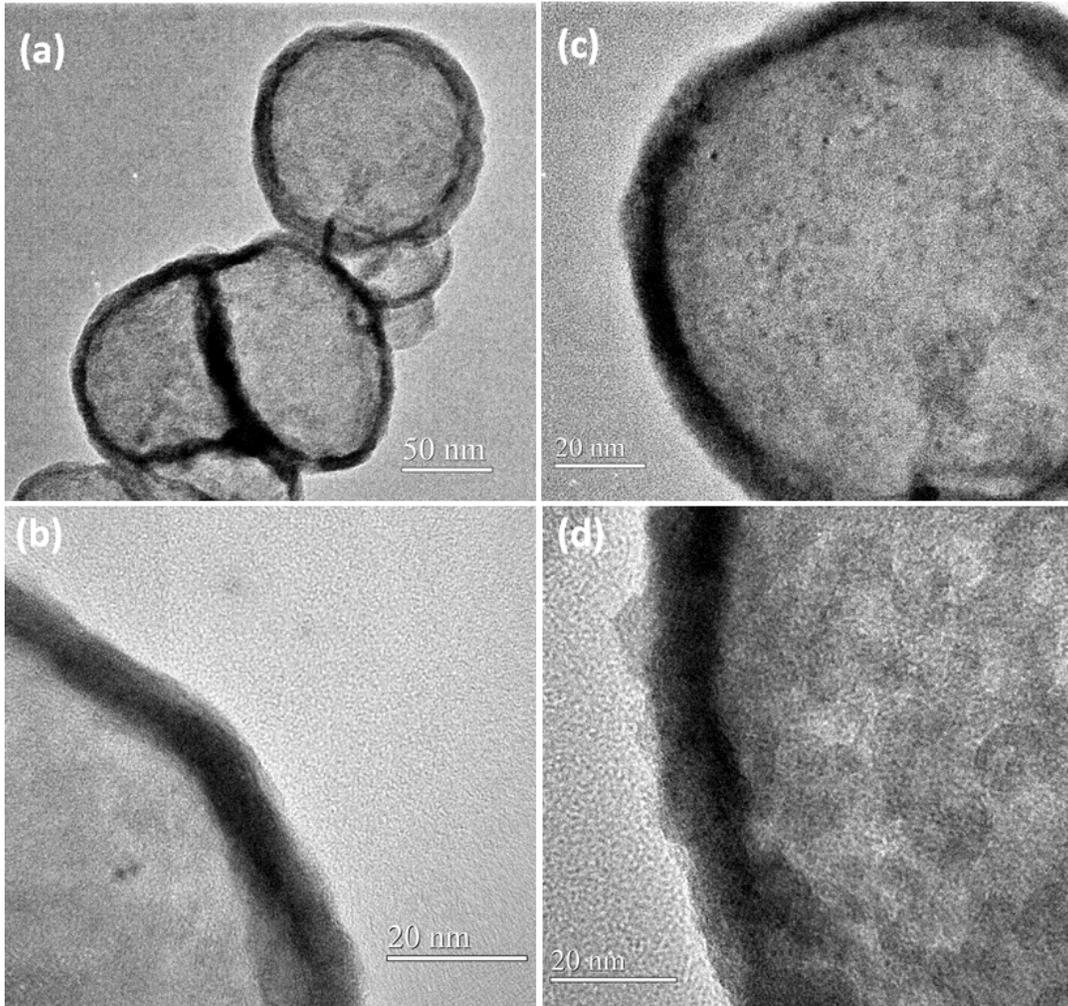


Figure S4. (a-d) TEM images of hollow Mn_3O_4 after 140 cycles. Note: c-d are from different spheres.