Supporting Information of Multifunctional Magnetic Silver Nanoshells with Sandwich-like Nanostructures

*Minghai Chen, Yong Nam Kim, Hyeok Moo Lee, Cuncheng Li, and Sung Oh Cho**

Department of Nuclear and Quantum Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon 305-701, Republic of Korea.

Corresponding Author: Professor Sung Oh Cho, E-mail: socho@kaist.ac.kr, Tel: +82-42-869-3823

The detailed characterization of Fe_3O_4 nanoparticles

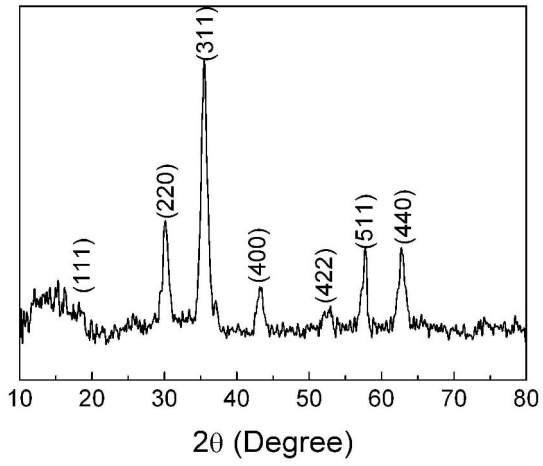

Figure S1. XRD pattern of Fe_3O_4 nanoparticles. All the peaks are well consistent with the standard PDF card No. 65-3107.

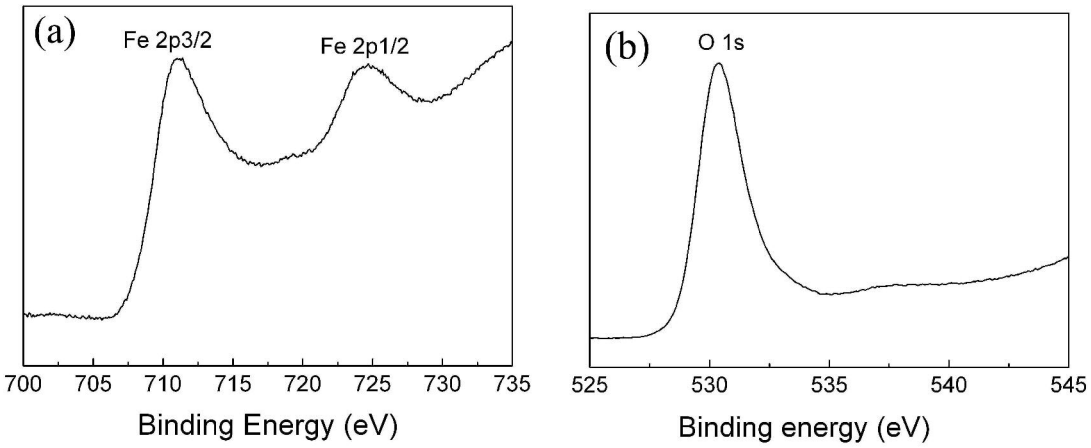

Figure S2. XPS spectra of Fe_3O_4 nanoparticles. The binding energy at 711.08 and 724.1 eV are corresponding to Fe 2p3/2 and Fe 2p1/2, respectively, which agree with the values of Fe_3O_4 in literature.[1] Additionally, for the peaks shape, the absence of the shoulder peak between two peaks that correspond to γ-Fe_2O_3 indicates the characteristic of Fe_3O_4.[1]

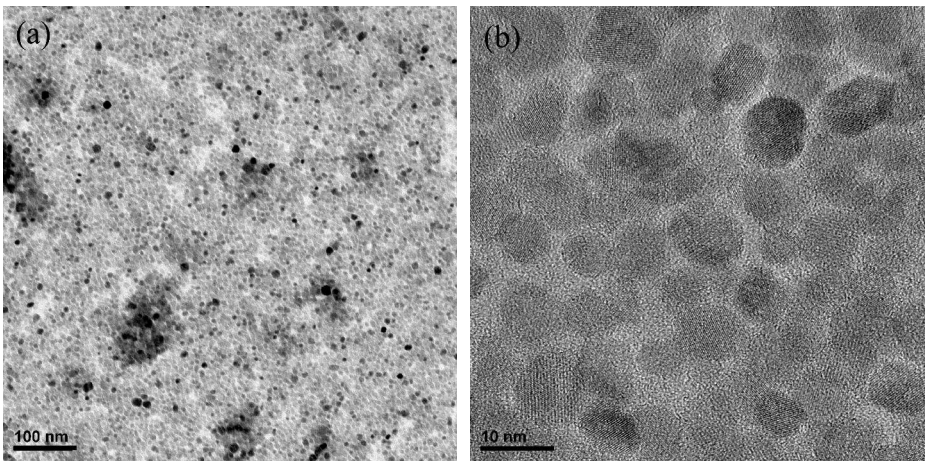

Figure S3. TEM images of Fe_3O_4 nanoparticles. The average diameter is about 8 nm.

Reference

(1) Wang, L. Y.; Luo, J.; Fan, Q.; Suzuki, M.; Suzuki, I. S.; Engelhard, M. H.; Lin, Y.; Kim, N.; Wang, J. Q.; Zhong, C. J. *J. Phys. Chem. B* **2005**, *109*, 21593.