

Supporting Information

A Facile Synthesis of Fluorescent Silver Nanoclusters with Human Ferritin as a Synthetic and Interfacing Ligand

In Hwan Lee, Byungjun Ahn, Jeong Min Lee, Chang Soo Lee, and Yongwon Jung*

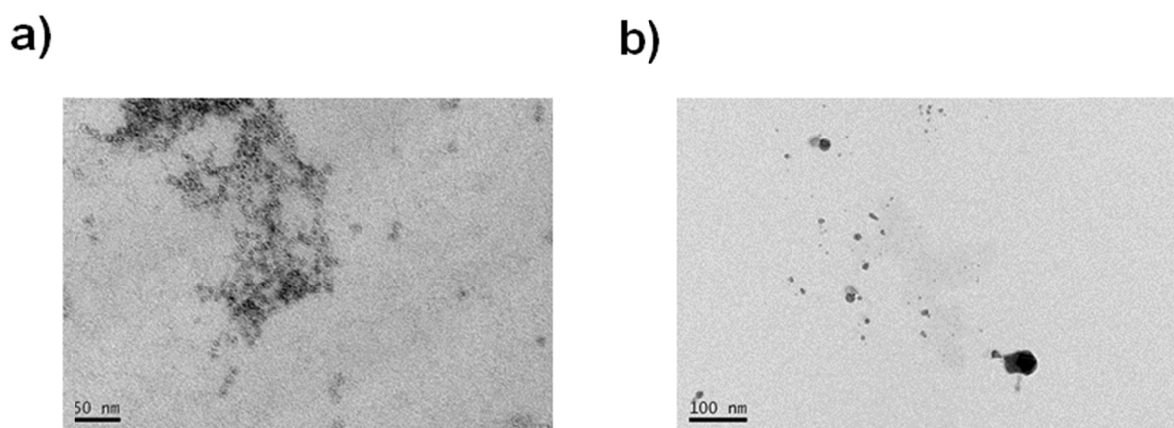


Figure S1. TEM images of ferritin-templated silver nanostructures synthesized in a chloride-containing buffer (a) with or (b) without negative ferritin staining.

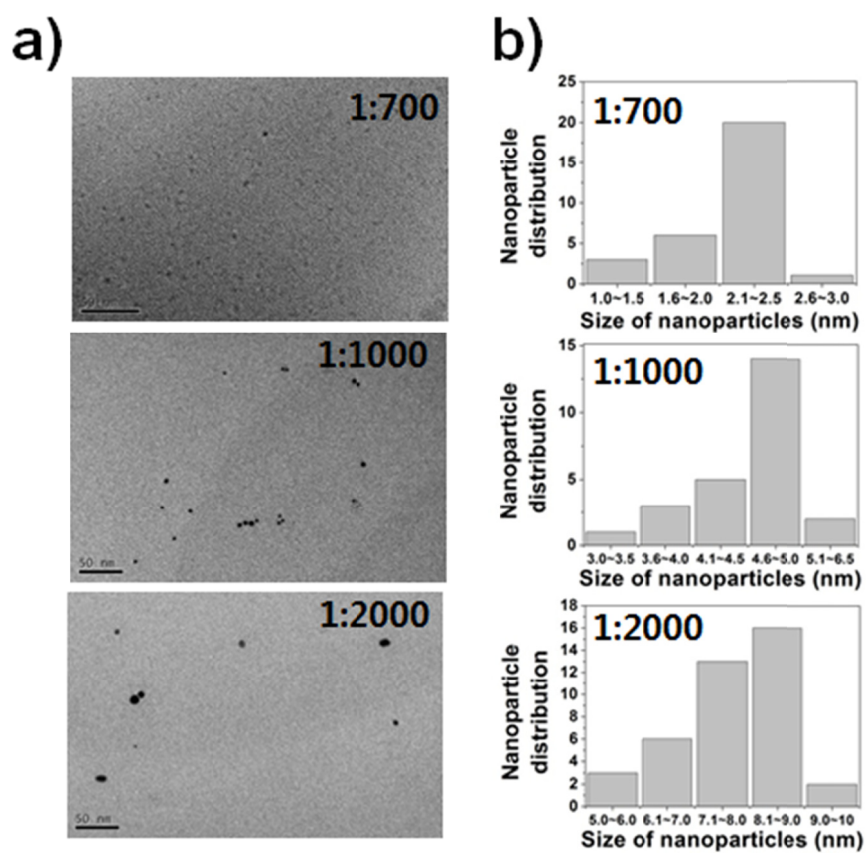


Figure S2. Silver nanoparticles formed under different ferritin/AgNO₃ ratios. (a)TEM images of silver nanoparticles. The protein/AgNO₃ ratios and scale bars (50 nm) are indicated. (b) Particle size distribution diagrams of silver nanoparticles based on TEM images.

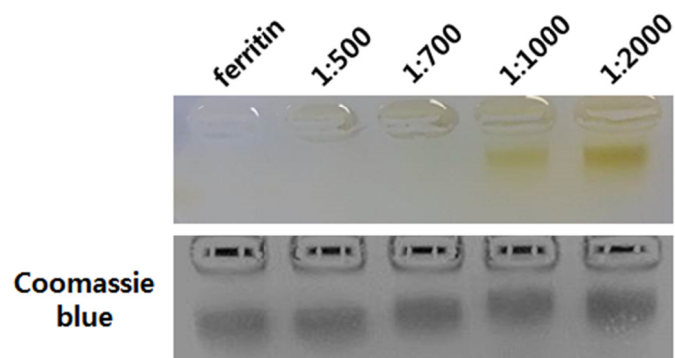
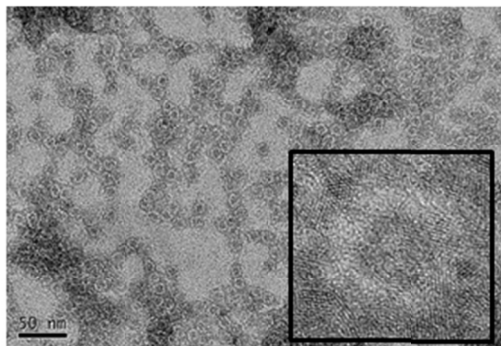


Figure S3. Gel electrophoretic analysis of ferritin-templated silver nanostructures. Ferritin proteins after silver reduction with diverse protein/silver ion ratios were applied to a 1.5% agarose gel. The gel was directly visualized (top) or stained with coomassie blue for protein detection. The protein/ AgNO_3 ratios are indicated.

a)



b)

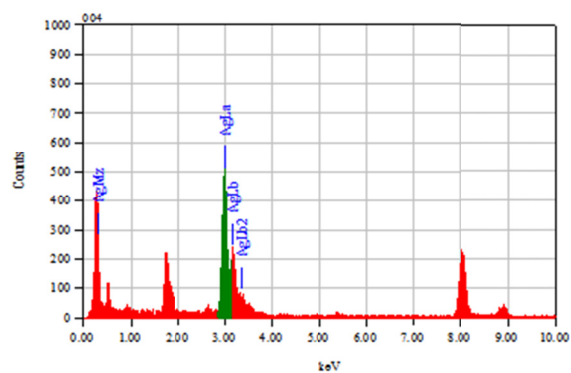


Figure S4. (a) TEM image and (b) EDS spectrum of Ft-Ag NCs.

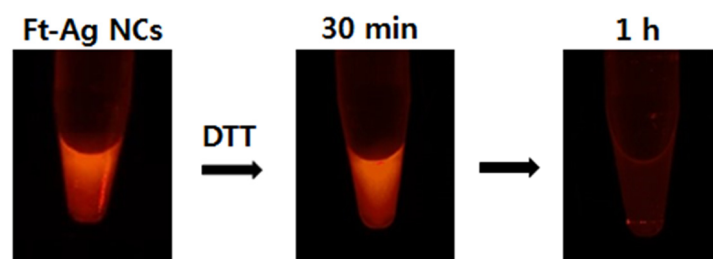


Figure S5. Fluorescence images of Ft-Ag NCs upon DTT treatment.

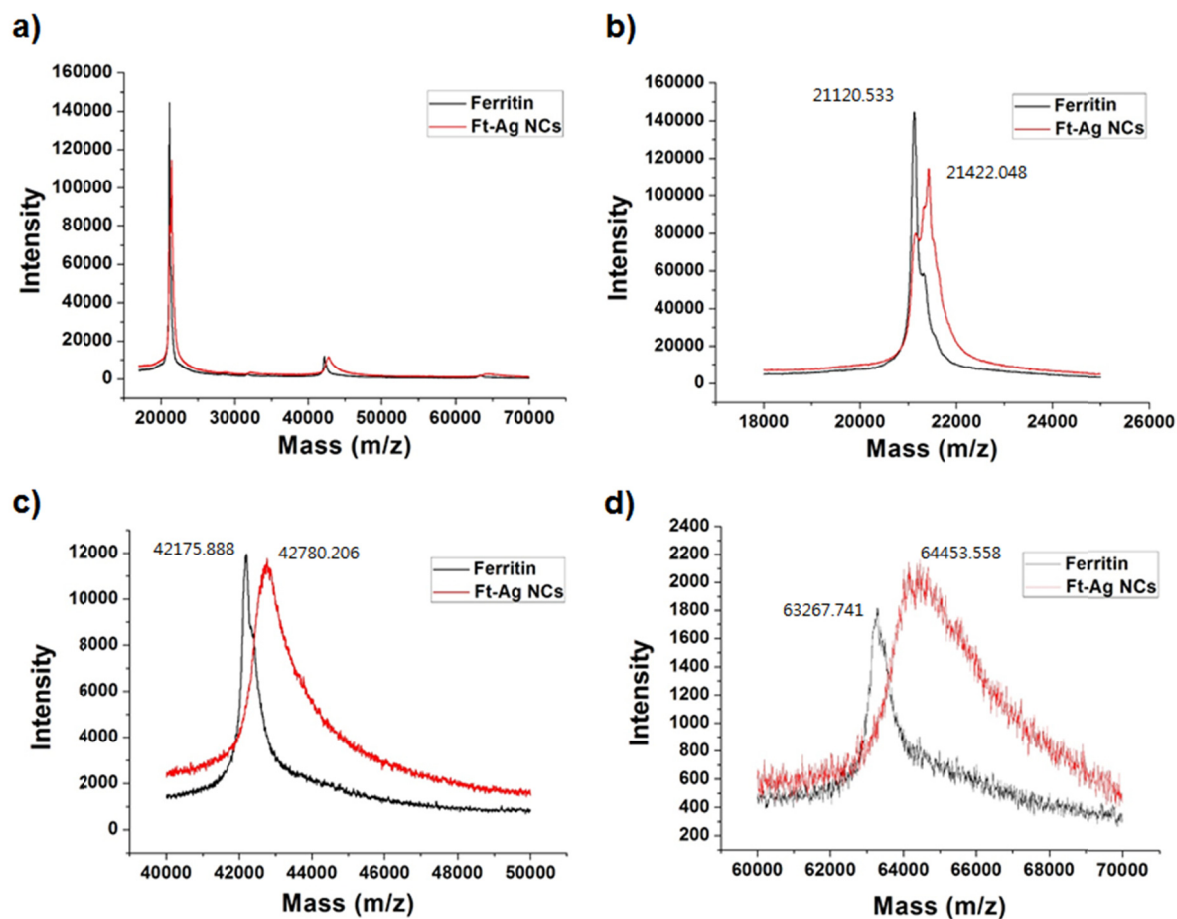


Figure S6. MALDI-TOF mass spectra of ferritin (black) and Ft-Ag NCs (red). (a) Full mass spectra of ferritin and Ft-Ag NCs. (b) Mass spectra of ferritin monomer with (red) or without (black) silver NCs. (c) Mass spectra of ferritin dimer with (red) or without (black) silver NCs. (d) Mass spectra of ferritin trimer with (red) or without (black) silver NCs. Mass peak values were indicated.

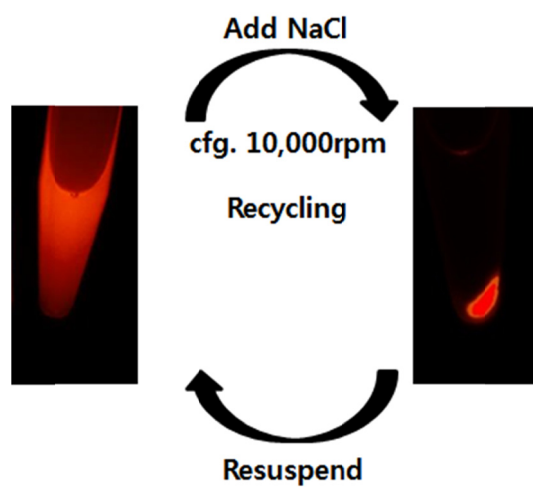


Figure S7. Fluorescence images of Ft-Ag NCs during NaCl-induced centrifugation and resuspension.