Electronic Supplementary Information

Formation mechanism of magnetic-plasmonic Ag@FeCo@Ag core-shell-shell nanoparticles: Fact is more interesting than fiction

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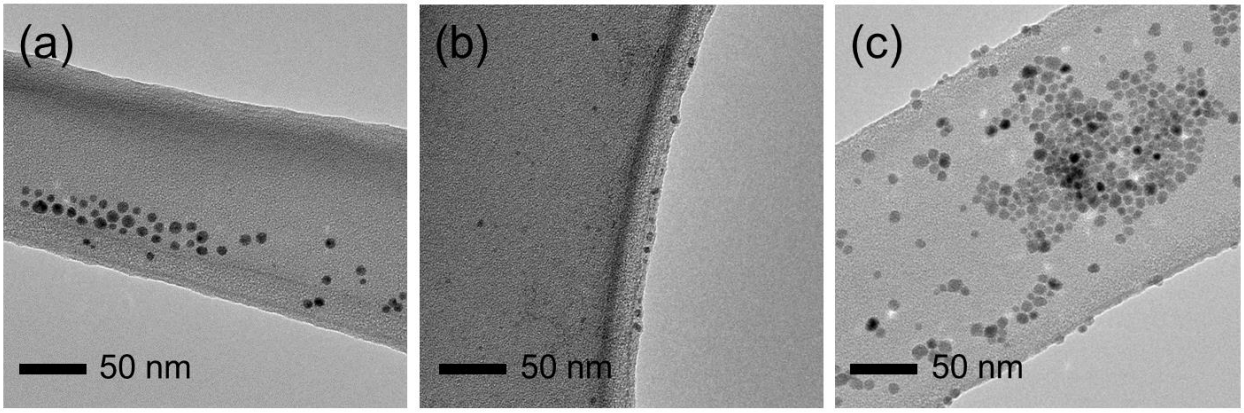

Fig. S1 TEM images of (a) Ag@FeCo NPs which were sampled at 250 ºC, (b) $Co_xFe_{1-x}O$ NPs which were sampled at 290 ºC and (c) resulting $Co_xFe_{1-x}O$ NPs after the reaction.

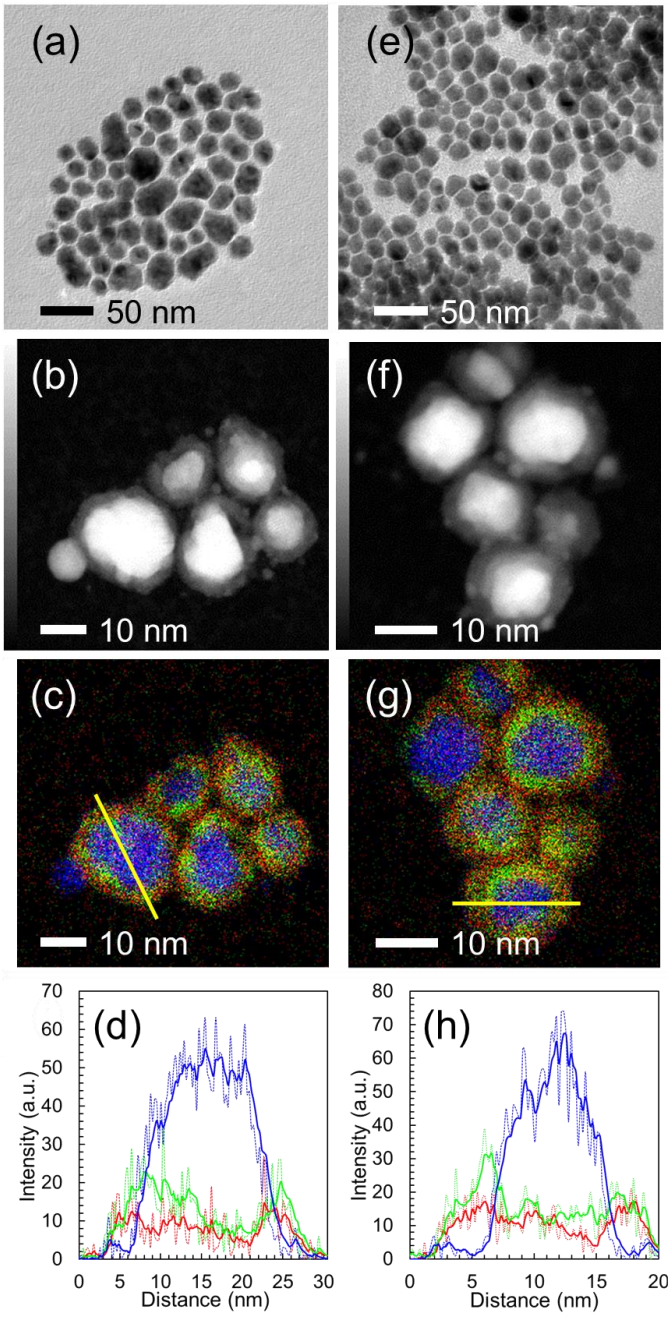

Fig. S2 Ag@FeCo@Ag NPs synthesized by changing order of the precursors. (a)-(c) Ag@FeCo@Ag NPs synthesized by injecting all precursors at 170 ºC. (a) TEM image, (b) STEM-HAADF image, (c) EDS elemental mapping image, (d) line profile of yellow line indicated in (c). The blue color shows Ag L edge, the green color shows Co K edge, the red color shows Fe K edge. (e)-(g) Ag@FeCo@Ag NPs synthesized by putting all precursors into a flask from the very beginning. (e) TEM image, (f) STEM-HAADF image, (g) EDS elemental mapping image, (h) line profile of yellow line indicated in (g). In both cases Ag@FeCo@Ag core-shell-shell structure was confirmed.