Supporting Information

Silver coated magnetic microflowers as an efficient and recyclable catalyst for catalytic reduction

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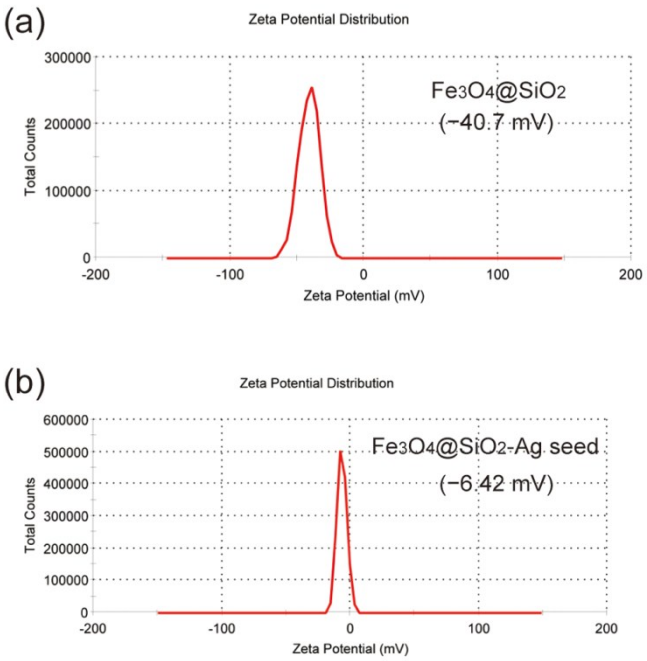

Fig. S1 Zeta potentials of (a) Fe_3O_4@SiO_2, and (b) Fe_3O_4@SiO_2-Ag seed particles in aqueous solution.

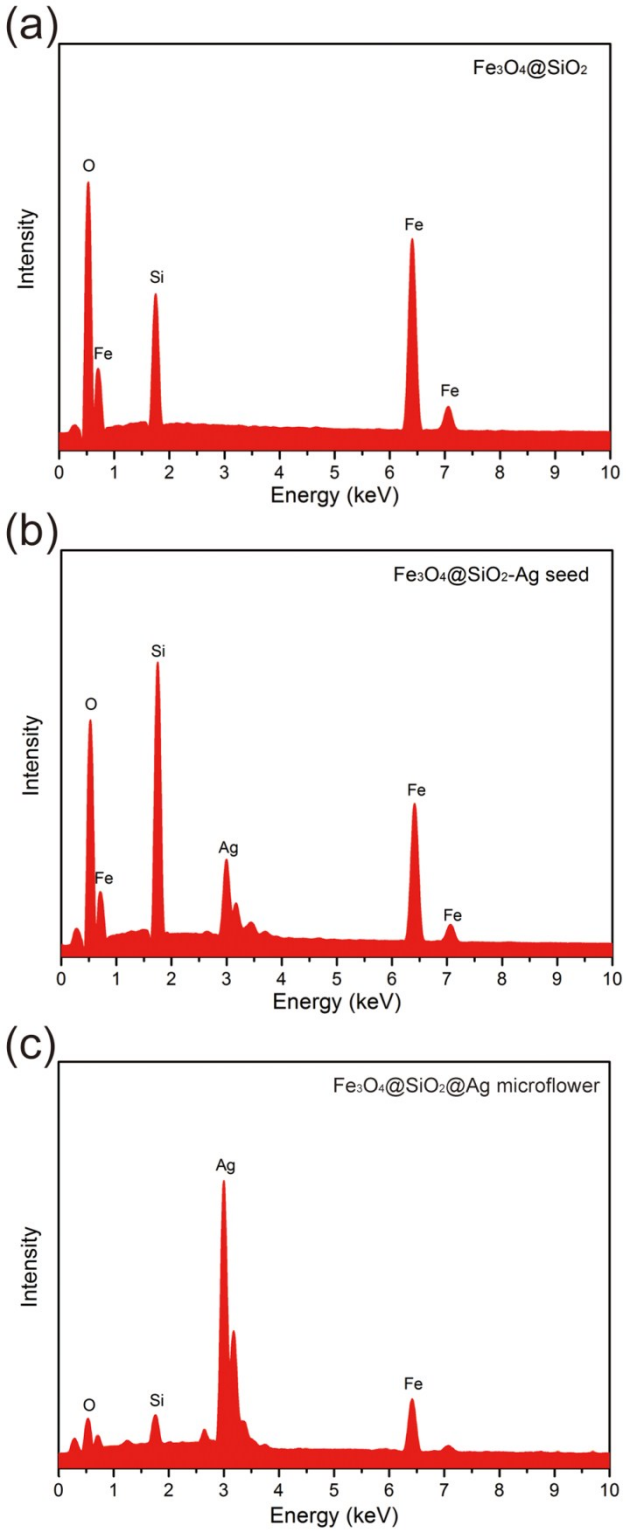

Fig. S2 EDS spectrum of (a) Fe_3O_4@SiO_2 particles, (b) Fe_3O_4@SiO_2-Ag seed and (c) Fe_3O_4@SiO_2@Ag microflowers.

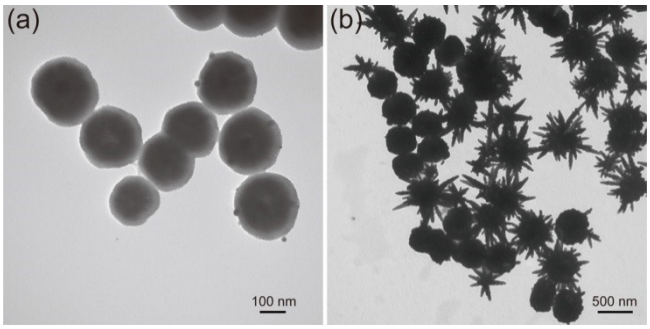

Fig. S3 TEM images of (a) Fe_3O_4@SiO_2-Ag seed particles with small Ag NPs (< 10 nm), (b) the corresponding Fe_3O_4@SiO_2@Ag microcomposites. Sparse Ag petals were observed on the surface of Fe_3O_4@SiO_2@Ag microcomposites, suggesting the too small Ag NPs on the Fe_3O_4@SiO_2-Ag seed particles are unsuitable for the fabrication of highly branched Ag shell.

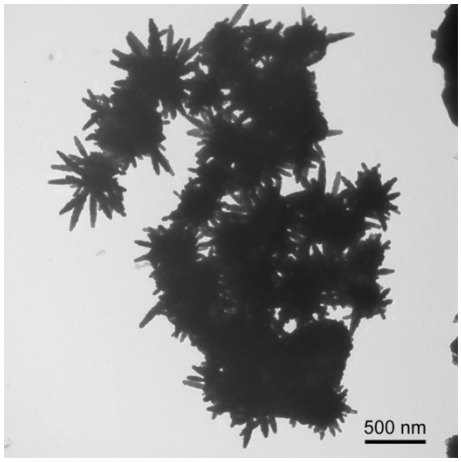

Fig. S4 TEM image of Fe_3O_4@SiO_2@Ag microflowers synthesized without PVP.

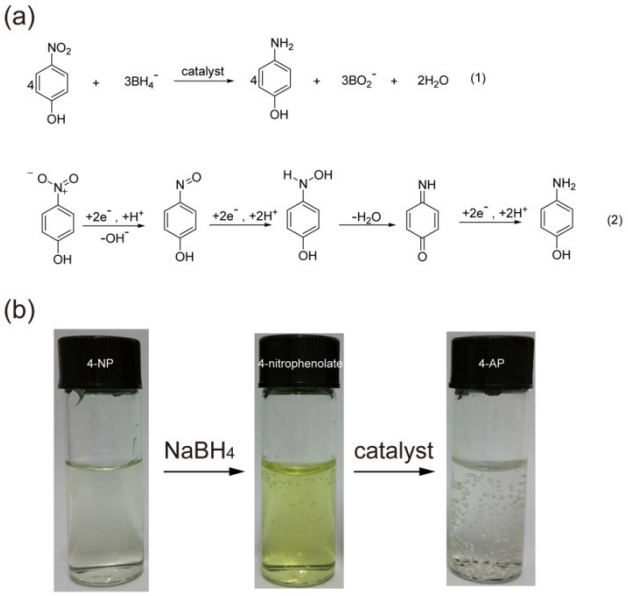

Fig. S5 (a) The general reaction steps for reduction of 4-NP to 4-AP. (b) The change of the corresponding color in

each step for reduction of 4-NP to 4-AP.

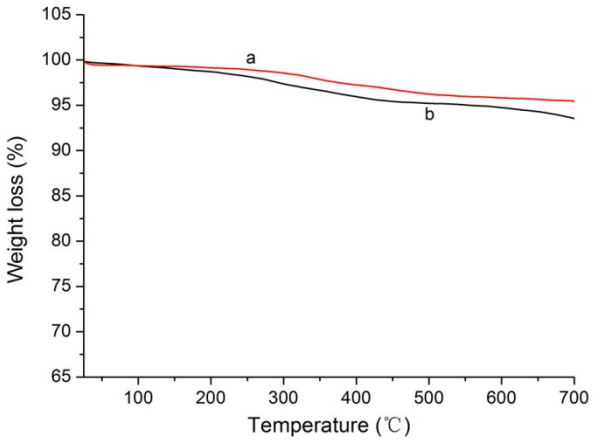

Fig. S6 TGA curves of highly-banched Fe_3O_4@SiO_2@Ag microflowers (a) before and (b) after six catalytic cycles.

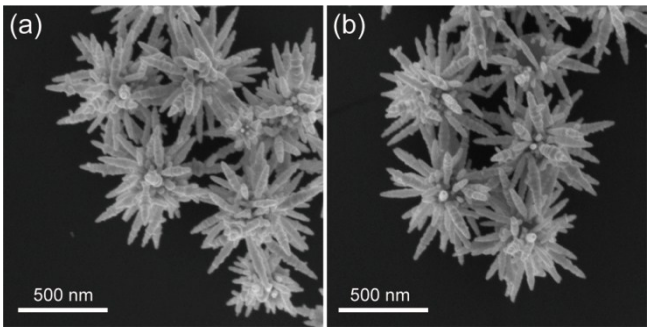

Fig. S7 SEM images of highly-banched Fe_3O_4@SiO_2@Ag microflowers (a) before and (b) after six catalytic cycles.