**Figure S1.** SEM images of silver nanoparticles reduced on the sintered glass filter with a \( \text{Ag}^+ \) concentration of (a) 225 mM, (b) 187.5 mM, (c) 150 mM, (d) 75 mM, and (e) 37.5 mM. The concentration ratio of the \( \text{Ag}^+: \text{ammonia}: \text{dextrose} \) was fixed at 1:6:10, and the deposition was held in a 55 °C water bath for 10 min. The porosity of the glass filter was 40–100 mm, and the magnification of the images were all 5000x.
**Figure S2.** SEM images of silver nanoparticles reduced on the different porosities of sintered glass filter with different magnifications. The porosity of the glass filter is (a.)~(c.) 100-160 μm, (d.)~(f.) 40-100 μm, and (g.)~(i.) 16-40 μm where the magnification of (a.), (d.), (g.) are 50000x, (b.), (e.), (h.) are 5000x and (c.), (f.), (i.) are 30x. The concentration of Ag⁺ in Tollen’s reagent is 150 mM and the ratio of Ag⁺:ammonia:dextrose was fixed at 1:6:10. The deposition of silver nanoparticles was held in a 55°C water bath for 10 minutes.
Figure S3. The relation between ln(C₀/Cₜ) of three nitroaniline isomers (■: o-NA, ●: m-NA, and ▲: p-NA) against the reaction time. against the reaction time reduced by 30 mM NaBH₄ in the presence of glass-filter supported nanoparticles at 50 °C. The pH of the solution was 10, and the silver nanoparticles immobilized glass-filter fabrication condition was the same as described in Figure 1(c).
**Figure S4.** (a.) The absorption time profile of 1 mM o-NA (■: first run, ●: second run, and ▲: third run) reduced by 30 mM NaBH₄ in the presence of glass-filter supported nanoparticles at 50 °C, where the silver nanocatalysts were consecutively reusing for three times. The pH of the solution was 10, and the silver nanoparticles immobilized glass-filter fabrication condition was the same as described in Figure 1(c). (b.) The absorption time profile of 1 mM o-NA (■: first run, ●: second run, and ▲: third run) catalyzed by glass-filter supported silver nanoparticles, where the silver nanocatalysts were treated with acidic water solution (pH=3) for 20 min then immersed with neutral water before recycled.