Electronic Supplementary Material

Au-Ag Alloy Nanoporous Nanotubes

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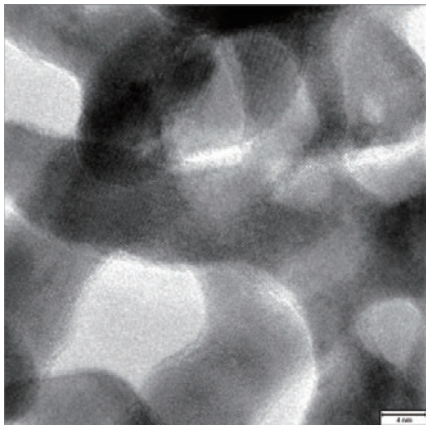

Figure S-1 HRTEM image of the wall structure of a single nanoporous nanotube. Continuous lattice fringes, pores, and ligaments are clearly resolved

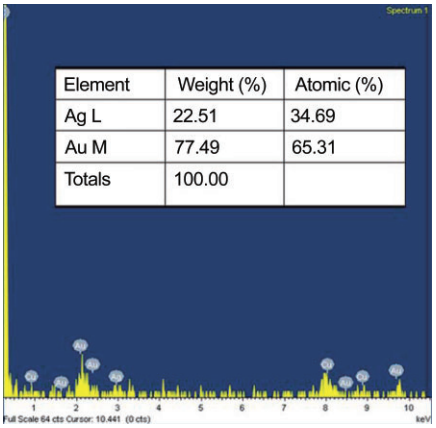

Figure S-2 EDS analysis of a single Au–Ag alloy nanoporous nanotube

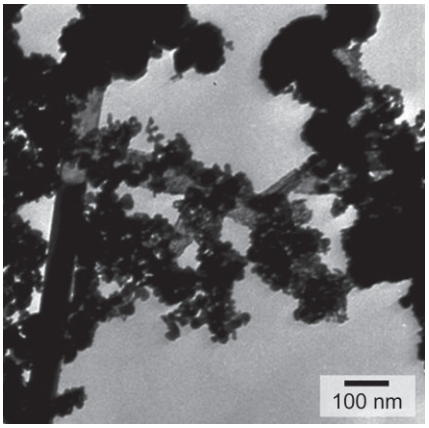

Figure S-3 Control experiments showed that in the absence of the surfactant (CTAB) and reducing agent (ascorbic acid), a large amount of AgCl precipitates formed due to the galvanic replacement reaction between $HAuCl_4$ and Ag nanowires, which prevented further deposition of Au onto the nanowires

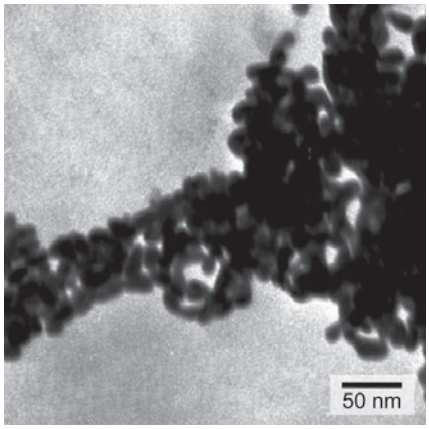

Figure S-4 Control experiments showed that in the absence of the reducing agent (ascorbic acid), increasing the volume of $HAuCl_4$ to more than 4 mL induced the disintegration of the 1-D nanostructure into gold nanoparticles, even in the presence of the surfactant (CTAB)

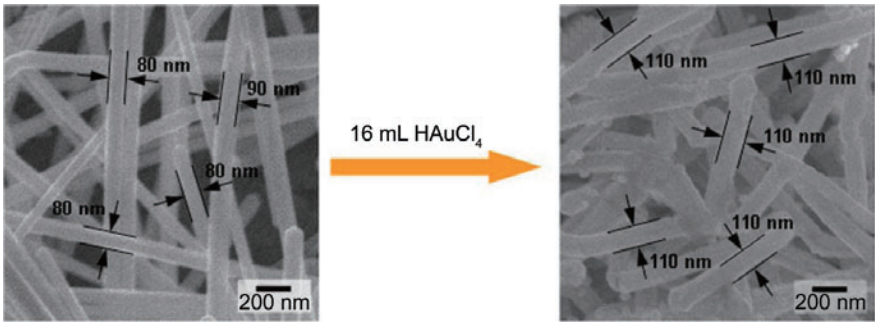

Figure S-5 The surface modification process is highly controllable in our work, and reduction/deposition of 16 mL $HAuCl_4$ onto Ag nanowires apparently increases the diameter of these 1-D nanostructures from ~80 nm (Ag nanowires in (a)) to ~110 nm (Ag/Au nanocomposites in (b))