Supporting Information

Effect of TiO₂ Shell on Optical and Thermal Properties of Silver Nanowires†

Parthiban Ramasamy, Dong-Min Seo, Sang-Ho Kim and Jinkwon Kim*
Department of Chemistry and GETRC, Kongju National University, 182 Shinkwan, Kongju, Chungnam, 314-701, South Korea

Fig. S1 (a) SEM and (b) TEM images of Ag@TiO₂ core-shell nanowires synthesized from 7.0 µM of TBT.

Fig. S2 (a) SEM and (b) TEM images of Ag@TiO₂ core-shell nanowires synthesized in the absence of
functionalized monolayers.

**Fig. S3** XPS spectra of S 2p.

**Fig. S4** SEM images of silver nanowires annealed at (a) 400 °C (b) 450 °C and (c) 500 °C for 15 min.
Fig. S5 XRD pattern of Ag@TiO$_2$ core-shell nanowires (shell thickness of 10 nm) annealed at a series of temperatures for 2h. In the case of annealed samples also we could not observe TiO$_2$ peaks in the XRD spectrum. This may be because the signals from the TiO$_2$ shells were relatively weak and overlapped with the background signals from glass substrates.

Fig. S6 Thermogram of the silver nanowires. The observed weight loss around 380 °C is mainly due to the decomposition of the organic PVP stabilizer.