Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information for "The combined effect of light irradiation and chloride on the physicochemical properties of silver nanoparticles"

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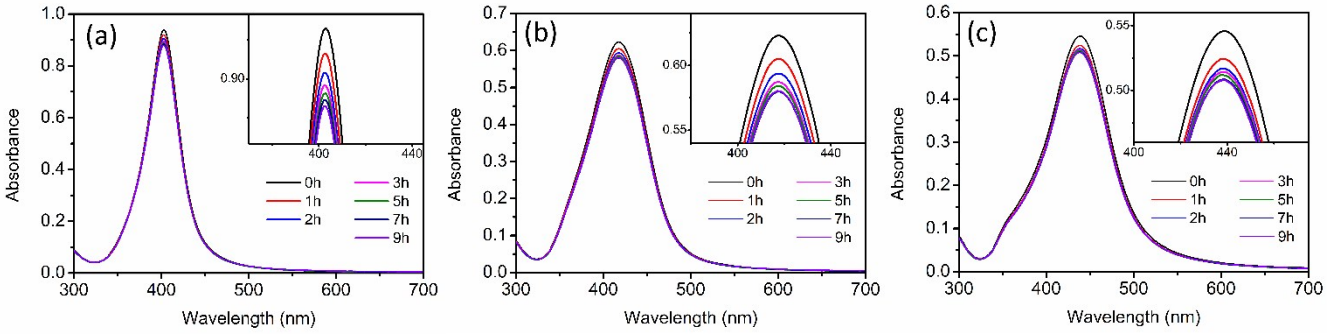

Figure S1. UV-vis spectrum of Ag NPs (nAg-20 (a), nAg-40 (b), nAg-57 (c)) over time during dark treatment in 0.5 mM NaCl.

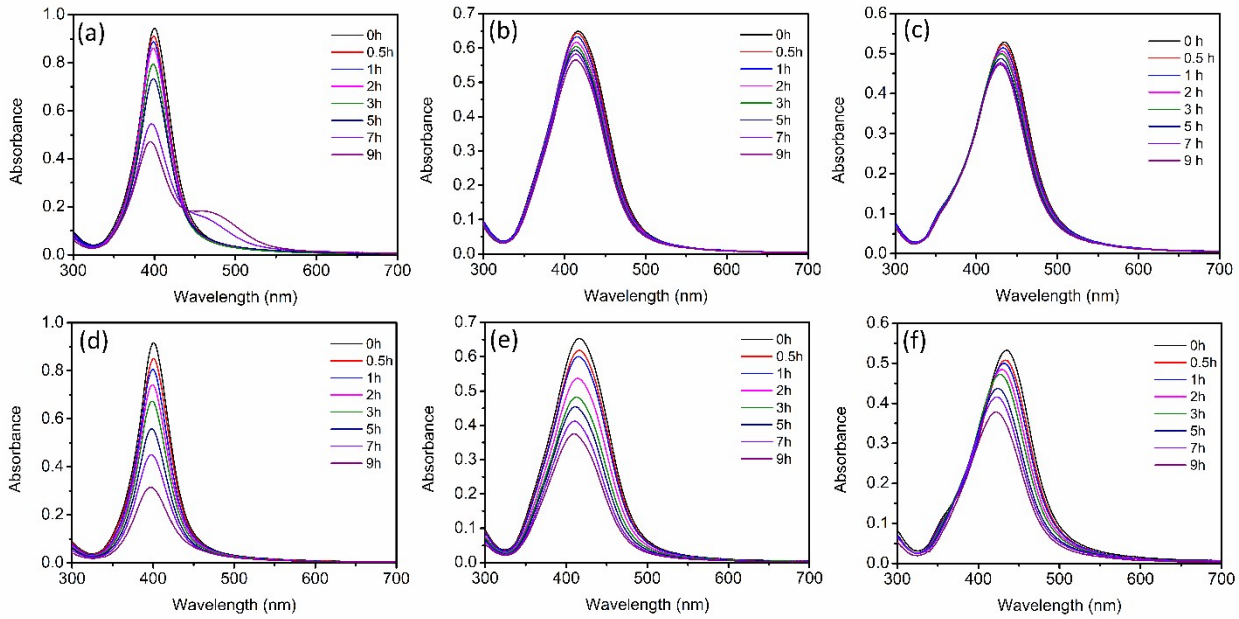

Figure S2. UV-vis spectrum of Ag NPs (nAg-20 (a, d), nAg-40 (b, e), nAg-57 (c, f)) over time during light irradiation in ultrapure water (a, b, c) and 0.5 mM $NaNO_3$ (d, e, f).

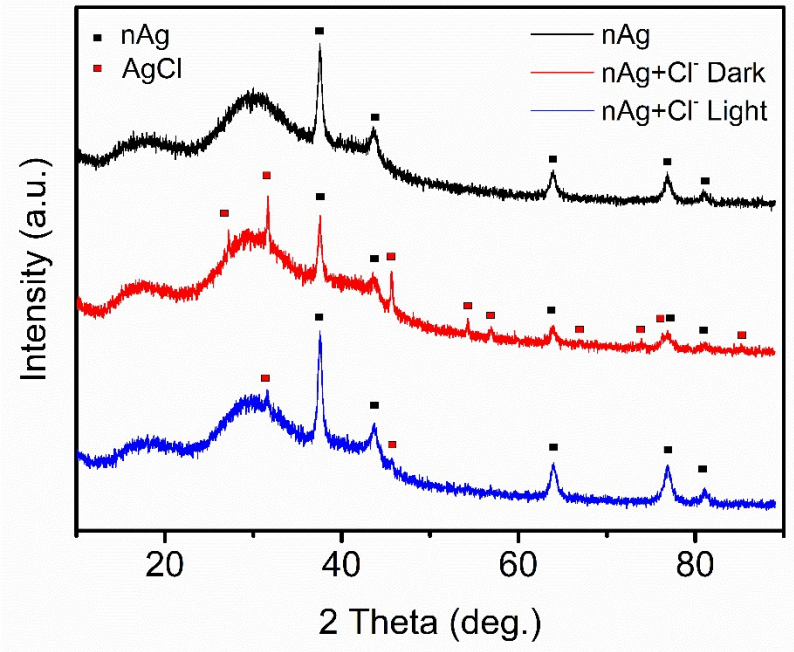

Figure S3. XRD patterns of Ag NPs without treating with Cl^- (up); XRD patterns of Ag NPs (500 μM) after treating with Cl^- (10 mM) in dark (middle) and light (down) for 9 h.

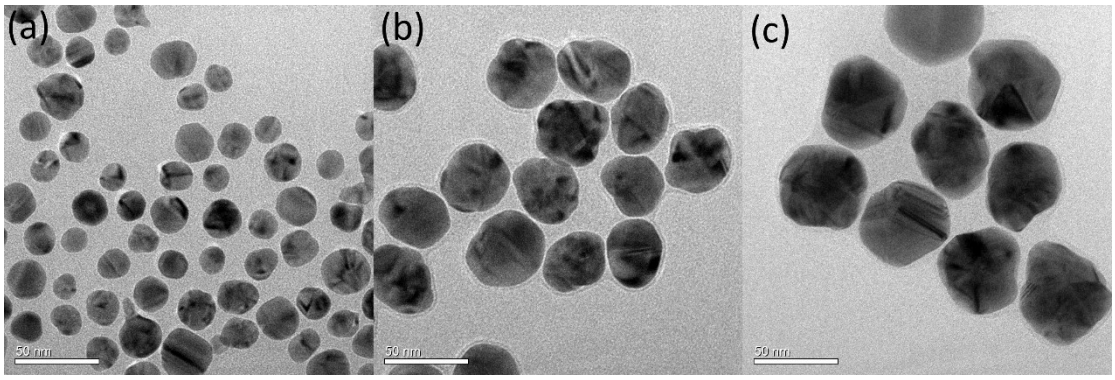

Figure S4. TEM images of Ag NPs (nAg-20 (a), nAg-40 (b), and nAg-57 (c)) after 9 h of dark treatment in 0.5 mM NaCl.

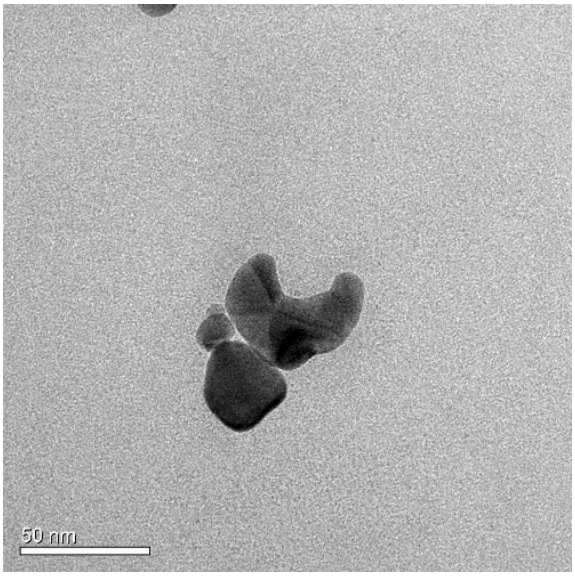

Figure S5. TEM image of nAg-57 after treating with H_2O_2.

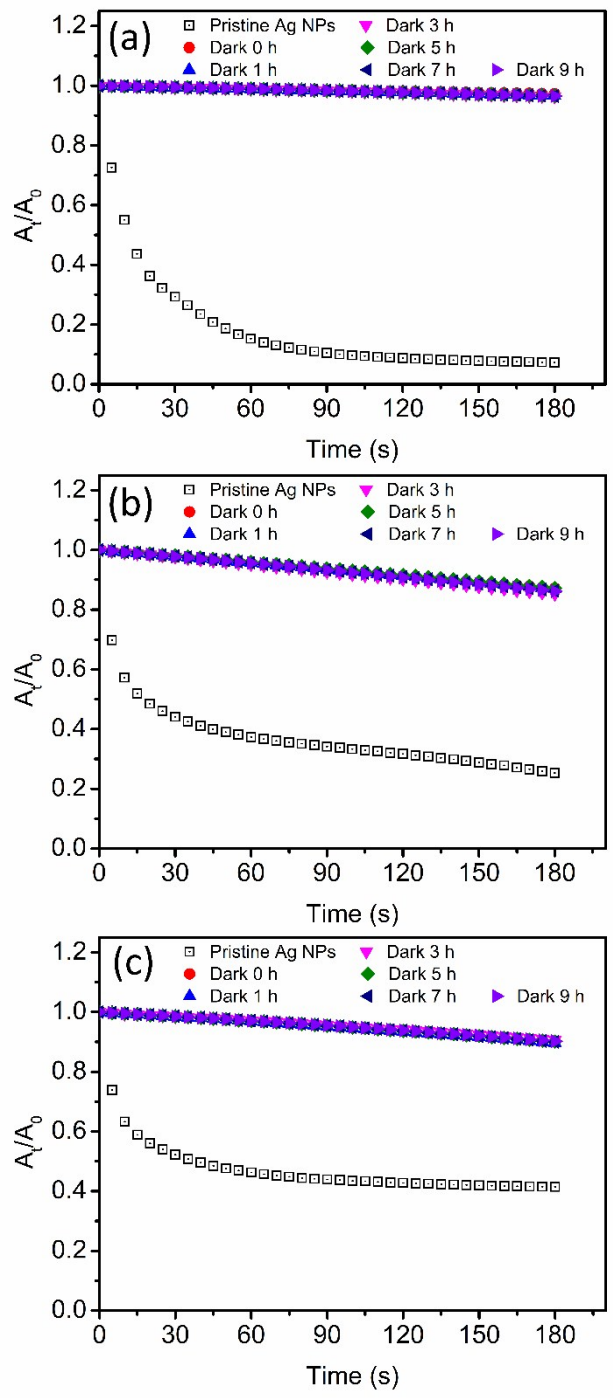

Figure S6. The decrease rate of Ag NPs (nAg-20 (a), nAg-40 (b), nAg-57 (c)) absorbance (A_t/A_0) with time after introducing H_2O_2 (200 g/L), where A_0 was the initial absorbance of Ag NPs at the maximum absorption wavelength, A_t was the absorbance of Ag NPs at time. Before the introduction of H_2O_2, Ag NPs was incubated with 0.5 mM Cl^- in dark conditions.