Supplementary Material (ESI) for Nanoscale
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Electronic supplementary information (ESI)

Uniform and Controllable Preparation of Au-Ag Core-Shell Nanorods using Anisotropic Silver Shell Formation on Gold Nanorods

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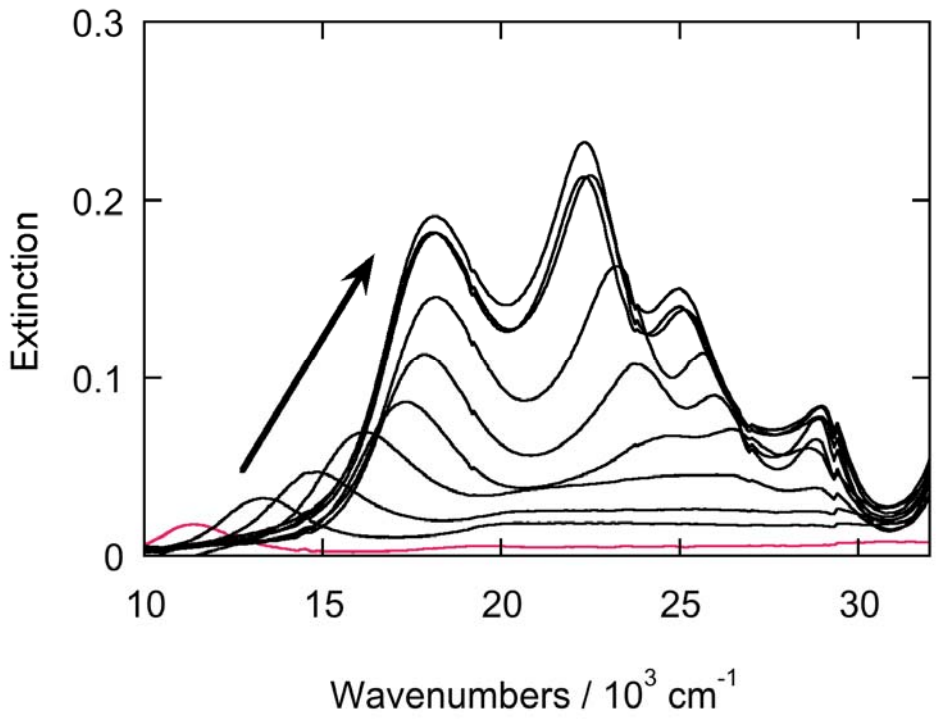

Fig. S1 Extinction spectra of Au-Ag core-shell nanorods prepared by using AgCl particles. Spectral changes of a reaction solution after the addition of AgCl particles and NaOH solutions (0, 10, 30, 60, 90, 120, 150, 180, 210, 240, 270 min).

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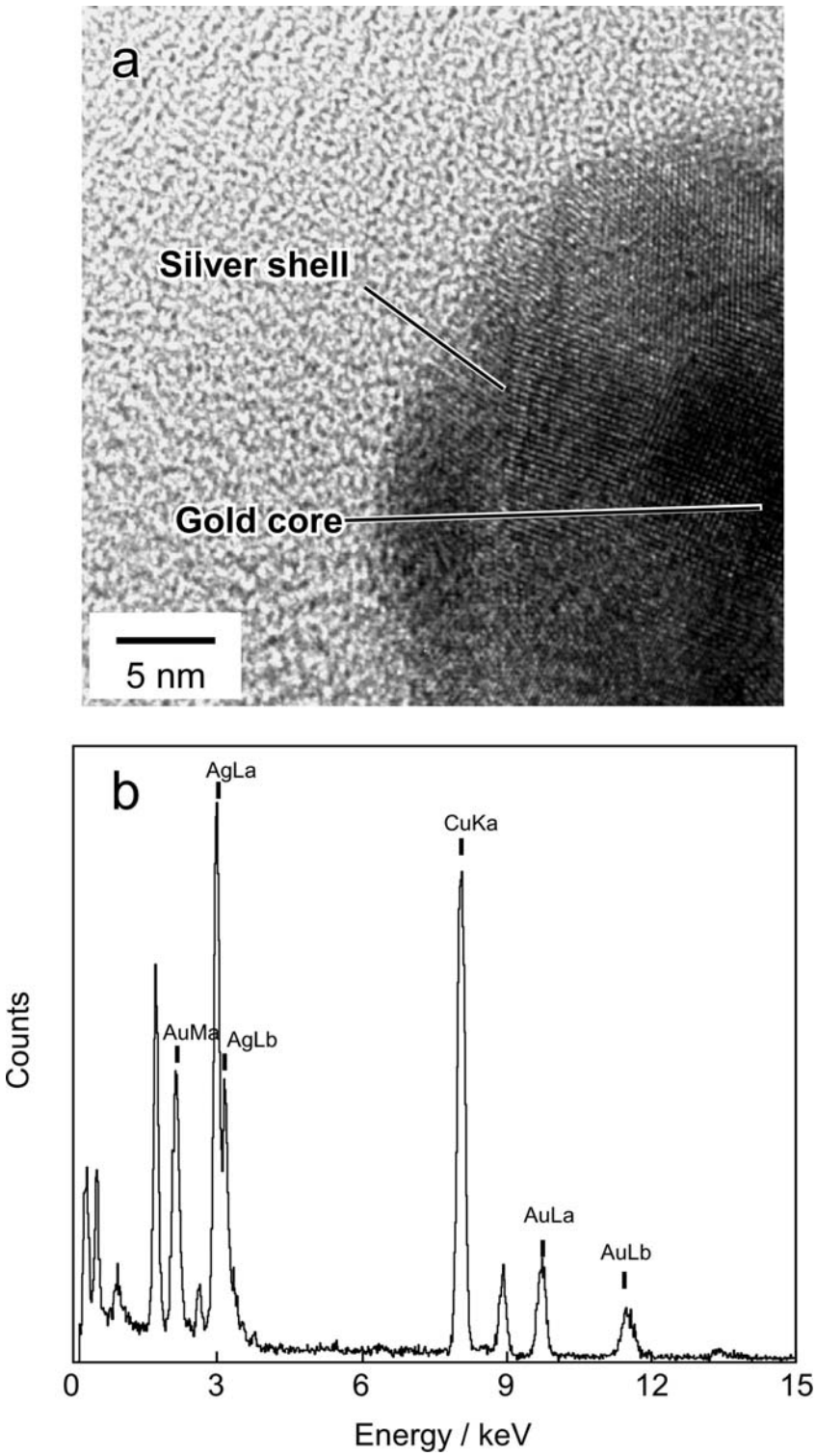

Fig. S2 TEM image and EDX spectrum of a core-shell nanorod

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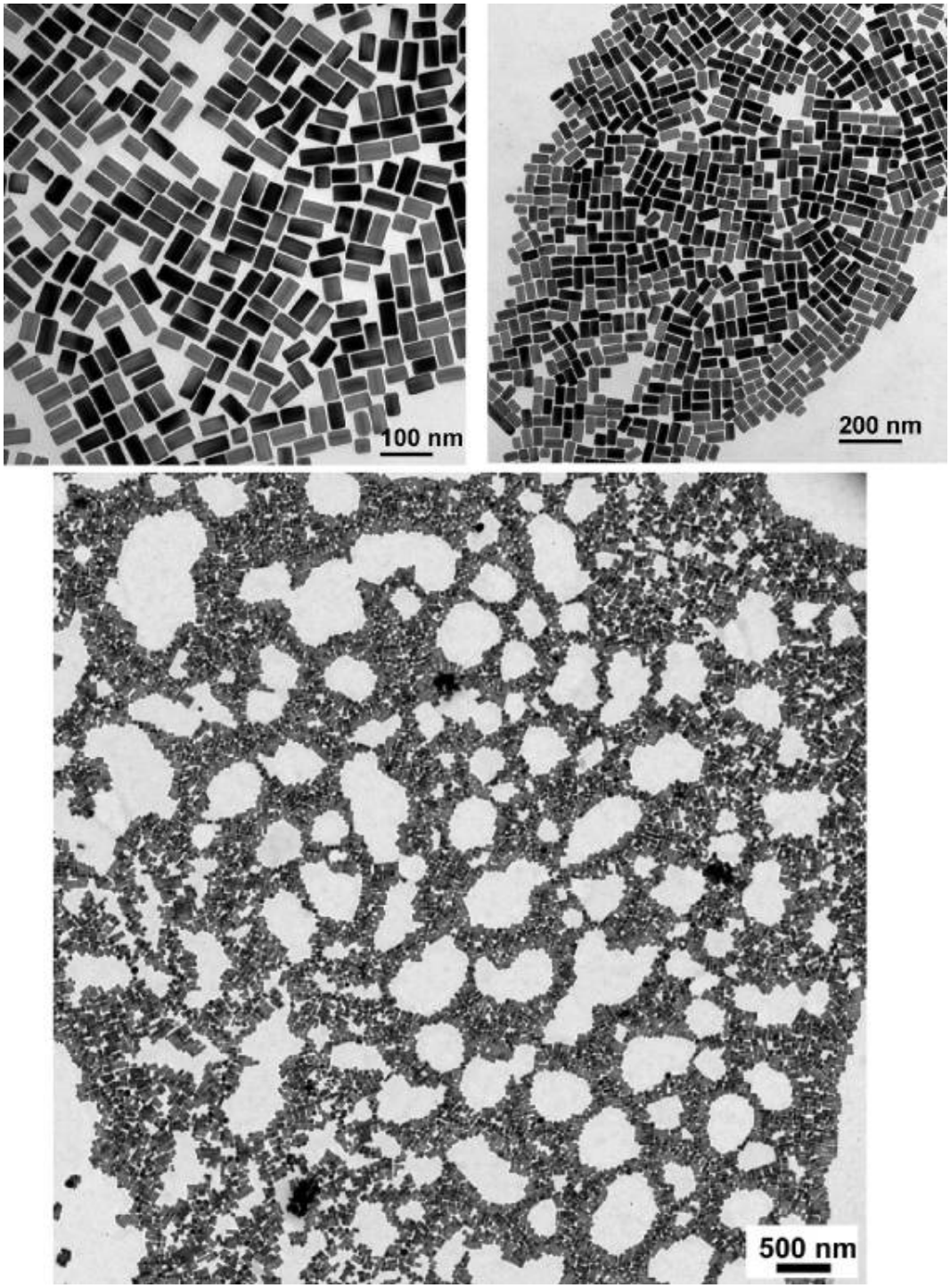

Fig. S3 TEM images of Au-Ag core-shell nanorods at 180 min after the addition of AgCl particles at room temperature and pH = 5.4.

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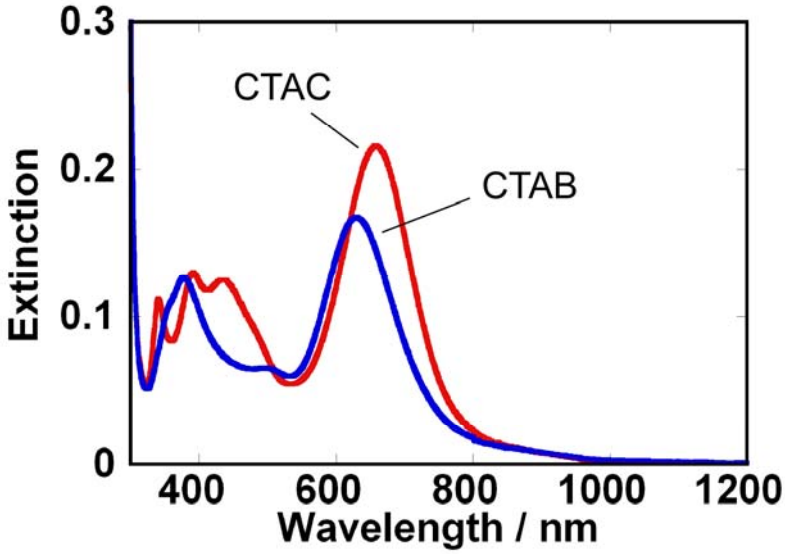

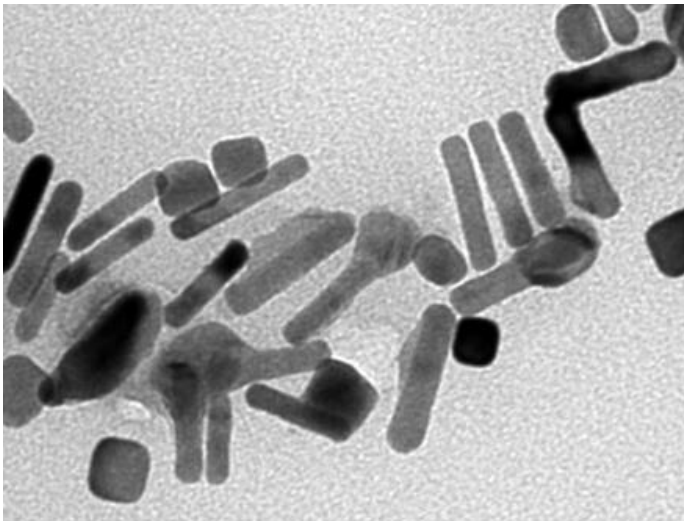

Fig. S4 Extinction spectra images of Au-Ag core-shell nanorods prepared in CTAB (Blue line) and CTAC (Red line) solutions and a TEM image of the core-shell nanorods in CTAB. Suspended AgCl particles were used as silver seeds, and the reaction time after the addition of AgCl particles was 180 min.

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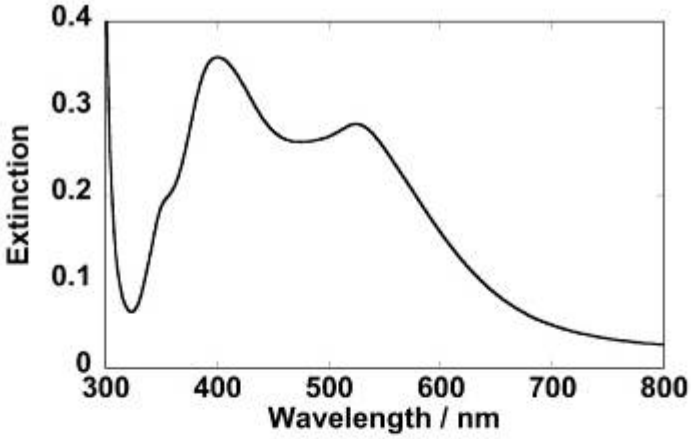

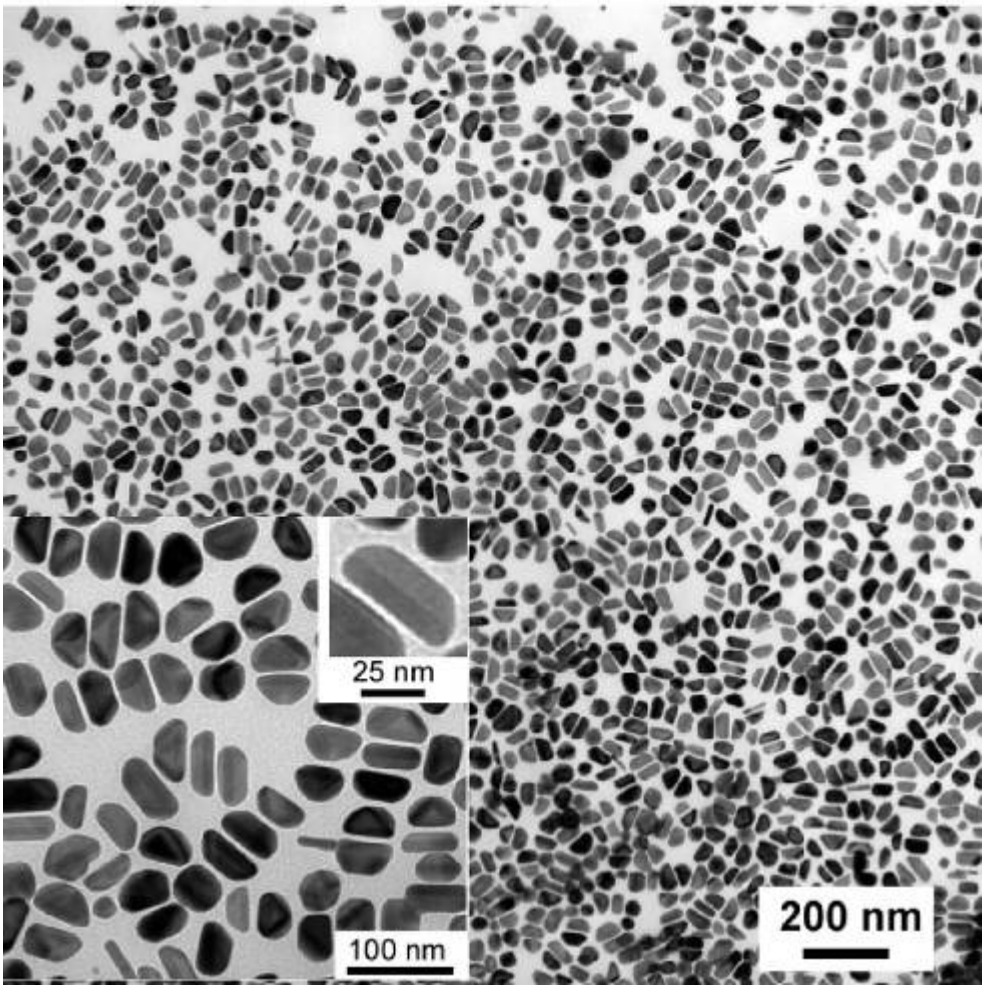

Fig. S5 Absorption spectrum and TEM images of Au-Ag core-shell nanorods at 180 min after the addition of AgNO3 at room temperature (Okuno, Y., et al., Chem. Lett. 38, 60-61 (2009)).

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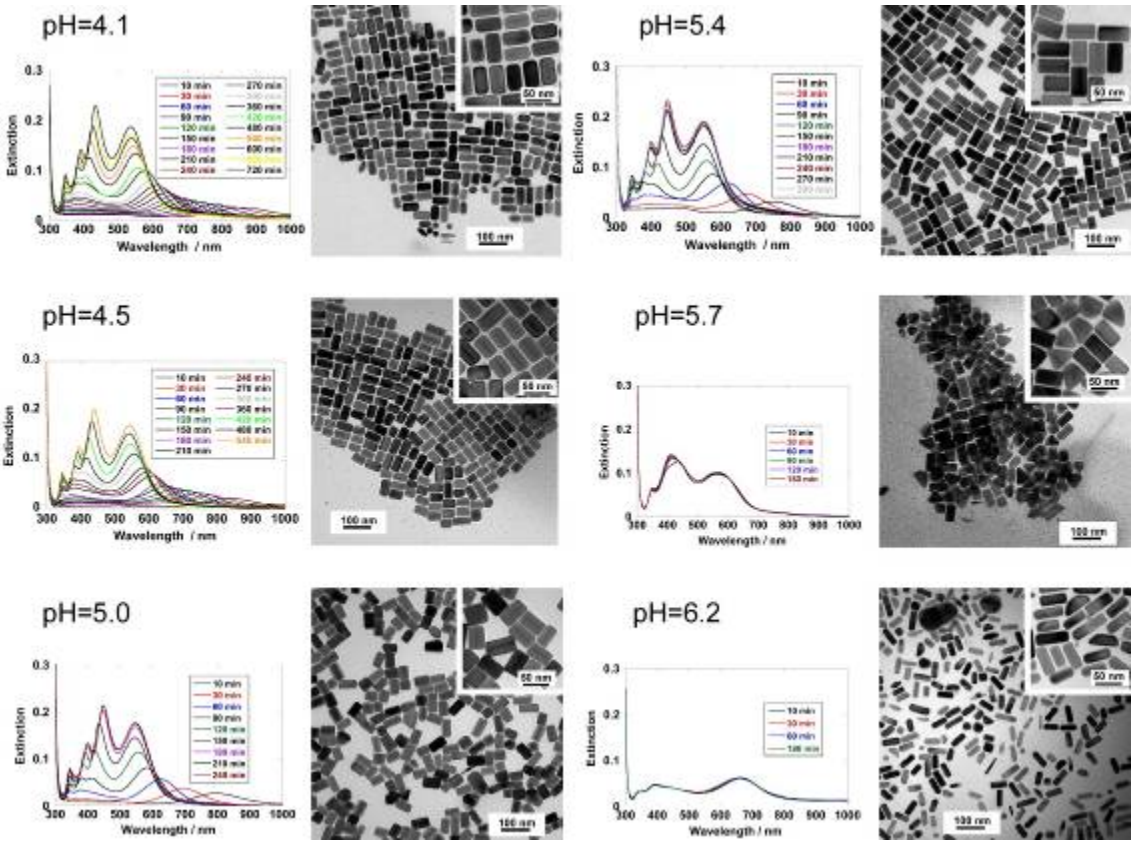

Fig. S6 Absorption spectra and TEM images of Au-Ag core-shell nanorods at 180 min after the addition of AgCl particles at room temperature.

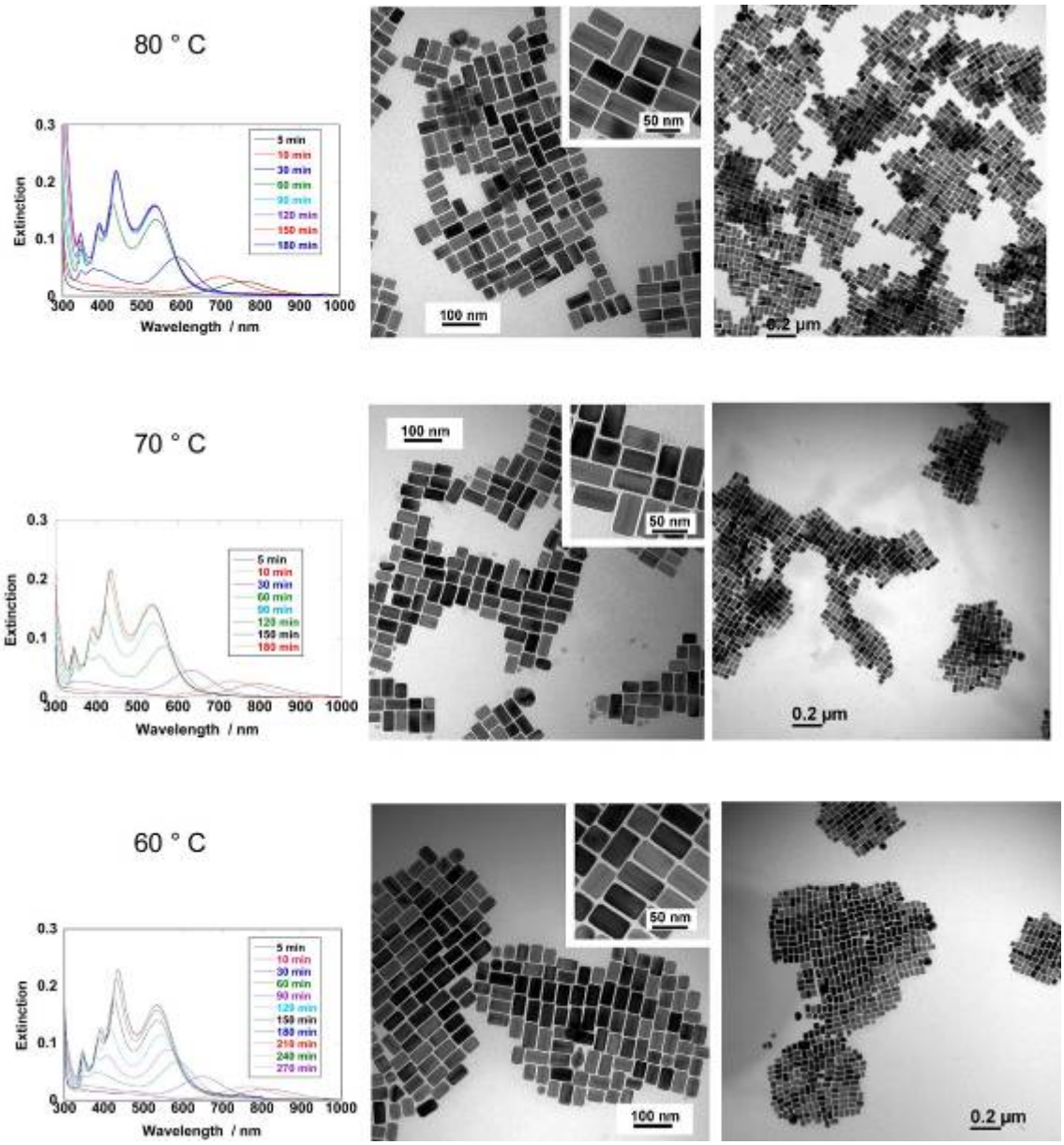

Fig. S7 Absorption spectra and TEM images of Au-Ag core-shell nanorods at 180 min after the addition of AgNO3 solutions at pH = 3.0 and different reaction temperatures.

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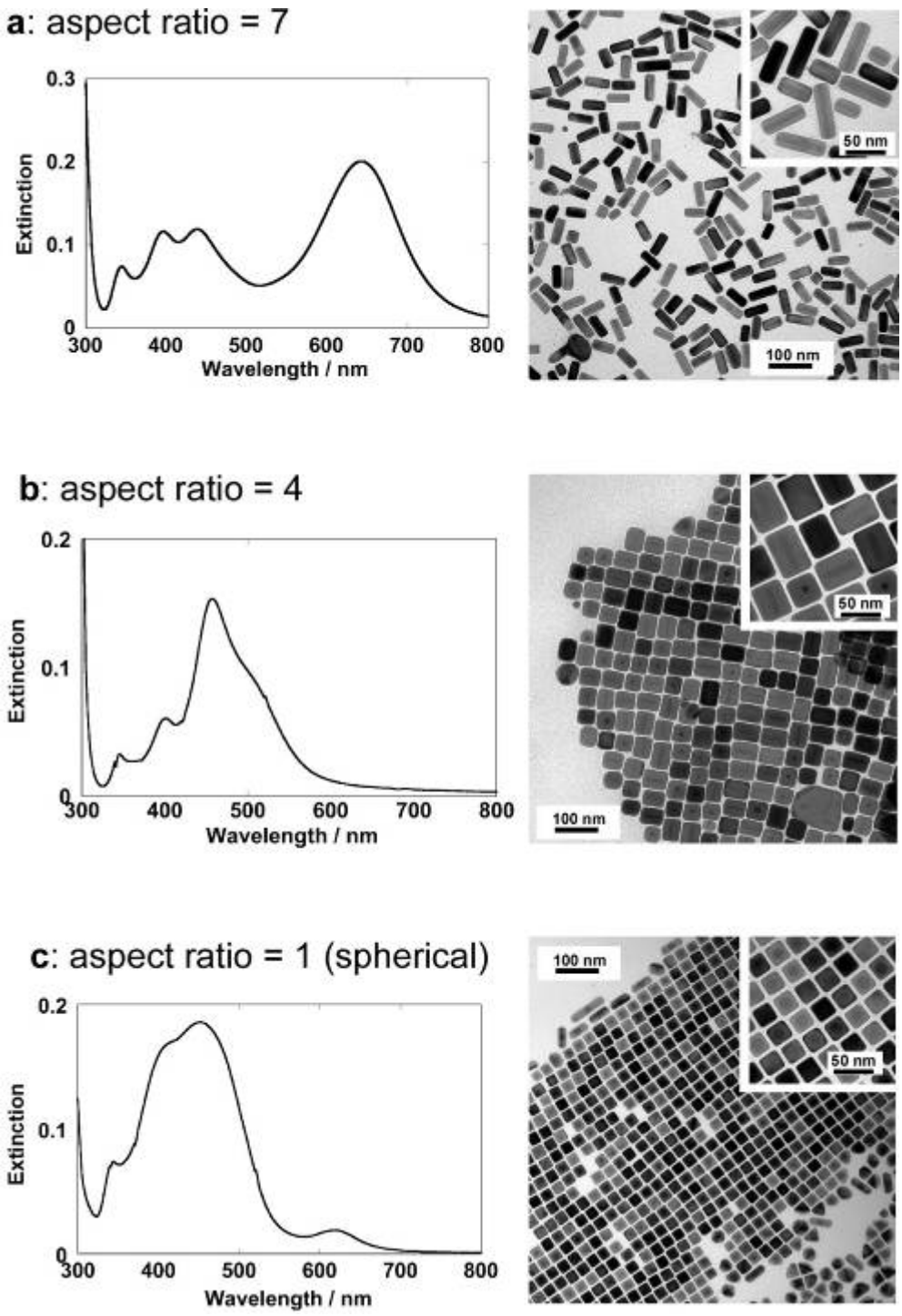

Fig. S8 Absorption spectra and TEM images of Au-Ag core-shell nanorods at 180 min after the addition of AgCl particles at pH = 5.4 using different core particles. Long gold nanorods (aspect ratio = 7) (a), short gold nanorods (aspect ratio = 4) (b), and spherical particles (c) were used.