

Figure. S1 Photographs of lyophilized CSH-Ag NCs solution under visible light (1) and UV light (2).

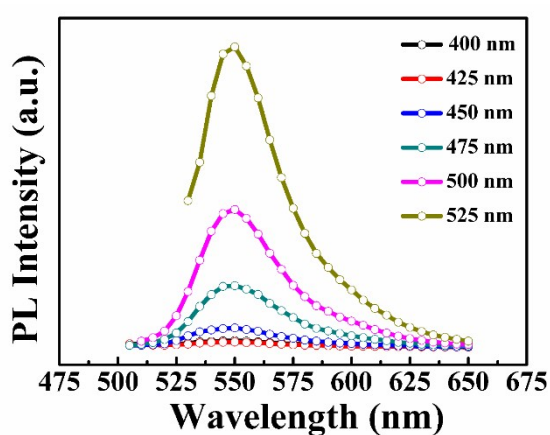


Figure S2. The excitation-independent PL spectrum of CSH-Ag NCs.

The quantum yield (QY) of the CSH-Ag NCs

The quantum yield (QY) of the CSH-Ag NCs was measured at 1.1% using a 405 nm Xe laser and calibrated with Rhodamin 6G (Sigma 252433, Dye Content: 99%). According the emission peak area and absorbance of CSH-Ag NCs and Rhodamin 6G, the QY of the CSH-Ag NCs could be calculated from Equation 1.

$$\phi_{sample} = \phi_{ref} \times \frac{F_{sample}}{F_{ref}} \times \frac{A_{ref}}{A_{sample}}$$

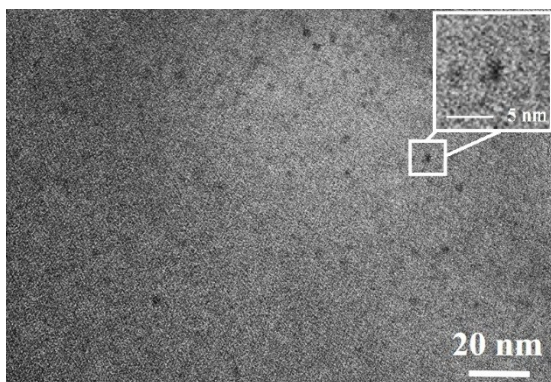


Figure S3. High resolution transmission electron microscopy (HRTEM) images showed the mean size of Ag NCs at two scale.

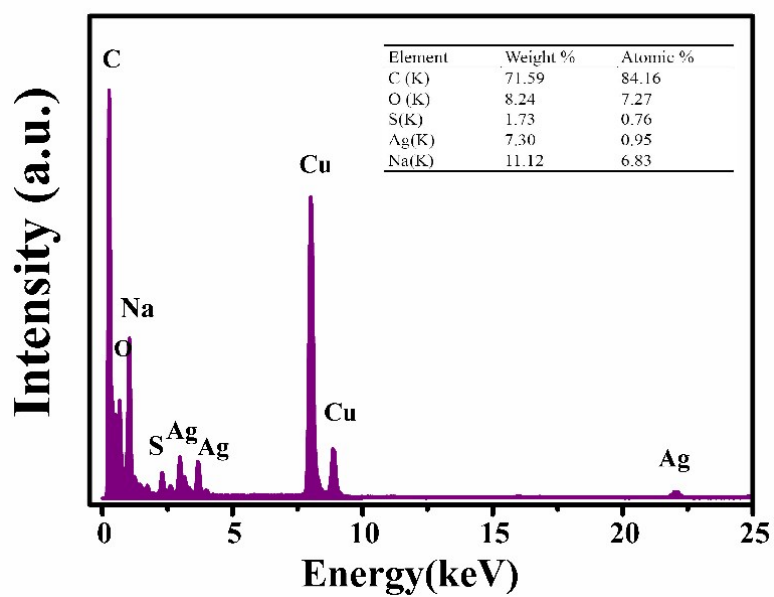


Figure S4. The EDAX spectrum of the Ag cluster along with the quantification data.

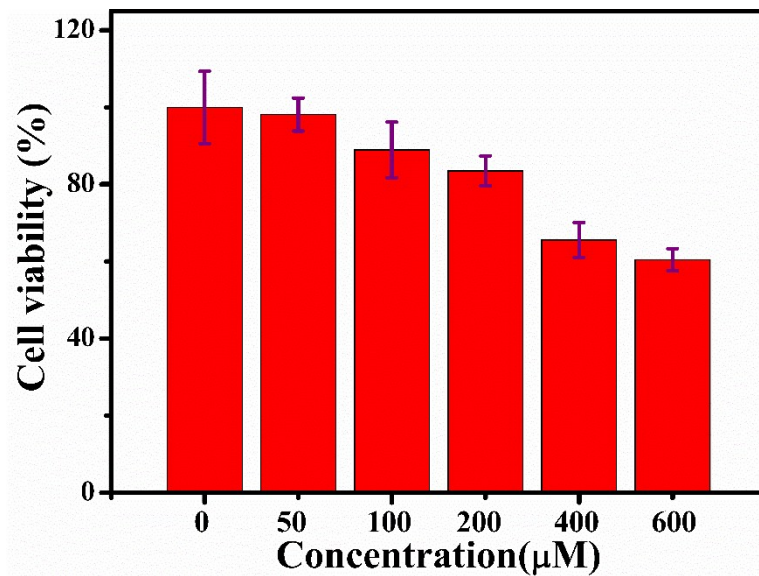


Figure. S5 Viability of MC-3T3 cells after 24 h of incubation with different concentrations (0 μM - 600 μM) of CSH- Ag NCs as determined by a MTT assay. The error bars represent the fluctuations among four independent measurements.

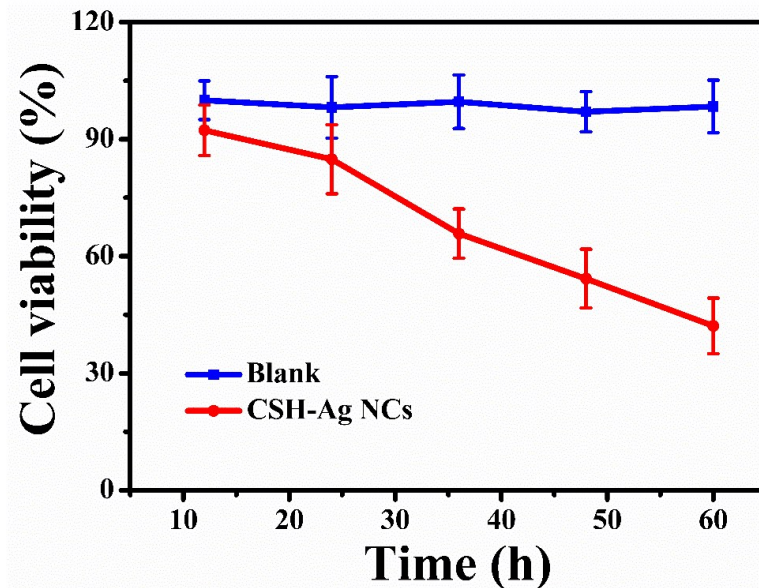


Figure. S6 Viability of MC-3T3 cells with and without addition of CSH-Ag NCs (50 μM) after incubation with different time interval (12, 24, 36, 48 and 60 hours) as determined by a MTT assay. The error bars represent the fluctuations among four independent measurements.