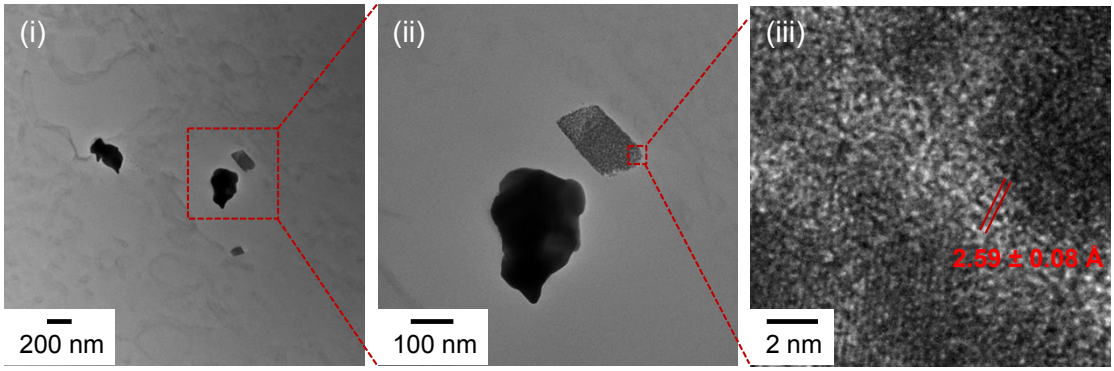
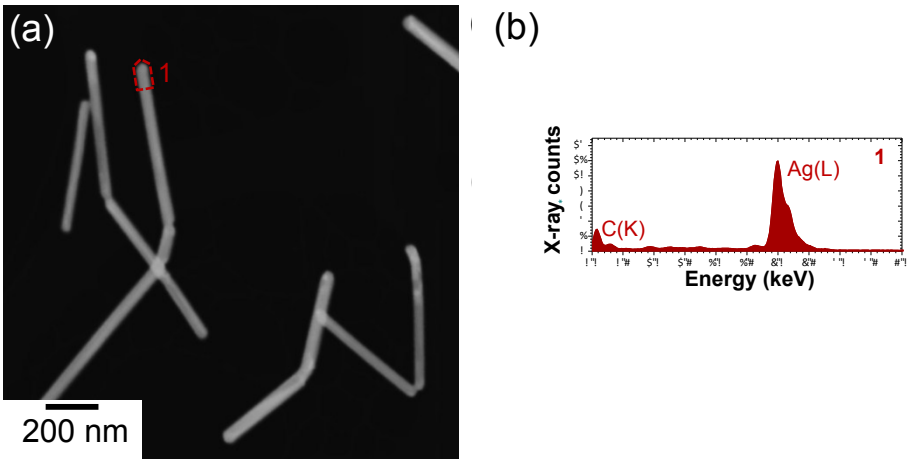
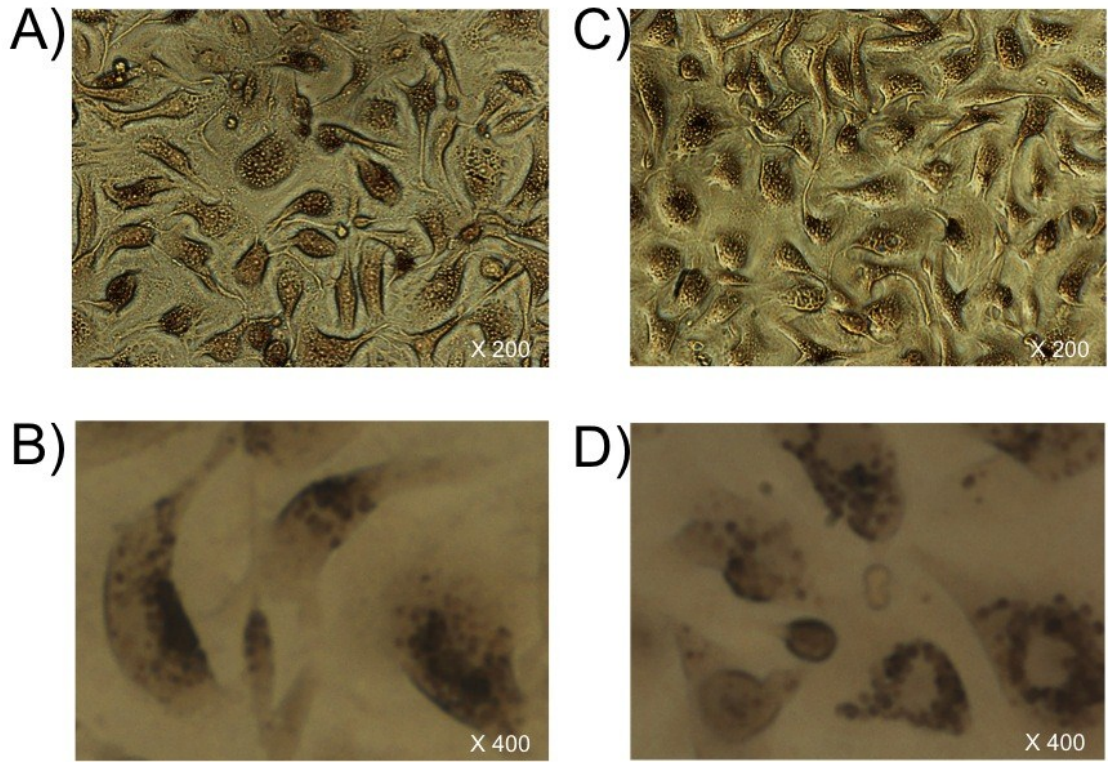
Electronic Supplementary Material (ESI) for Nanoscale.



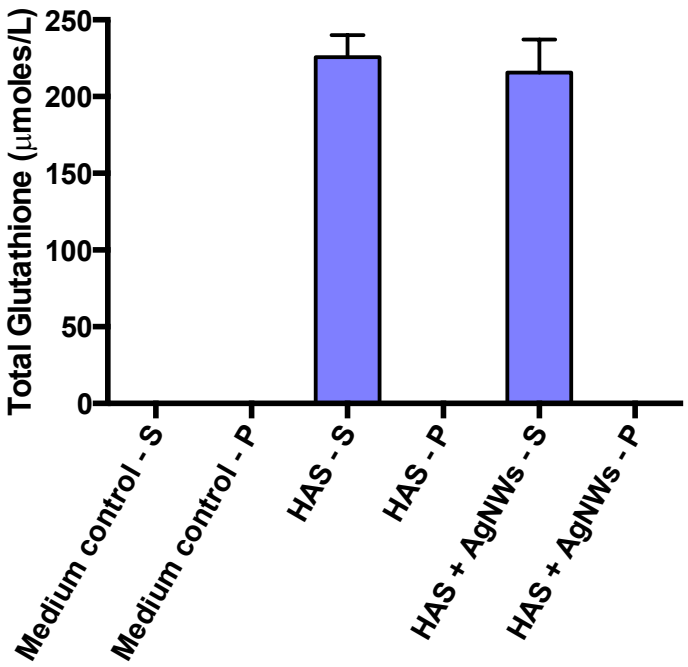
Supplementary Figure 1 – High-resolution TEM images of TT1 cells incubated for 24 hours with AgNWs pre-incubated with Curosurf, showing AgNWs in endosome-like vesicles. (ii) shows a magnification of the boxed area in (i). (iii) A HRTEM image from the boxed area in (ii). The lattice spacing corresponds to the monoclinic structure of Ag_2S (-121) (ref. 00-014-0072), confirming the precipitation of crystalline Ag_2S.



Supplementary Figure 2 Characterization of AgNWs incubated in HAS for 24 hours. **(a)** HAADF-STEM image of AgNWs showing that no morphological changes are observed with respect to as-synthesized AgNWs. **(b)** STEM-EDX spectrum collected from the area marked '1' in (a).



Supplementary Figure 3 Osmium tetroxide staining of lamellar bodies within ATII cells at Day 1 post-exposure to AgNWs, at X200 and X400 magnification (**C** and **D**, respectively) and corresponding non-treatead control at the same time interval, at X200 and X400 magnification (**A** and **B**, respectively). Briefly, the cells were washed in PBS (pH 7.3) and fixed with glutaraldehyde (15 ml/ml PBS) for 15 min. The cells were then washed twice and treated with osmium tetroxide (10 mg/ml PBS; Sigma) for 90 min at room temperature. The cells were then washed twice and incubated in tannic acid (10 mg/ml PBS, pH 6.8; Sigma) overnight. After washing with PBS (pH 6.8), the cells were examined and imaged under phase contrast (A and C) and differential interference contrast (B and D) light microscopy.



Supplementary Figure 4 – Total glutathione levels in HAS remain in the supernatant (S) following centrifugation in the presence of AgNWs; no glutathione was measured in the pellet (P).