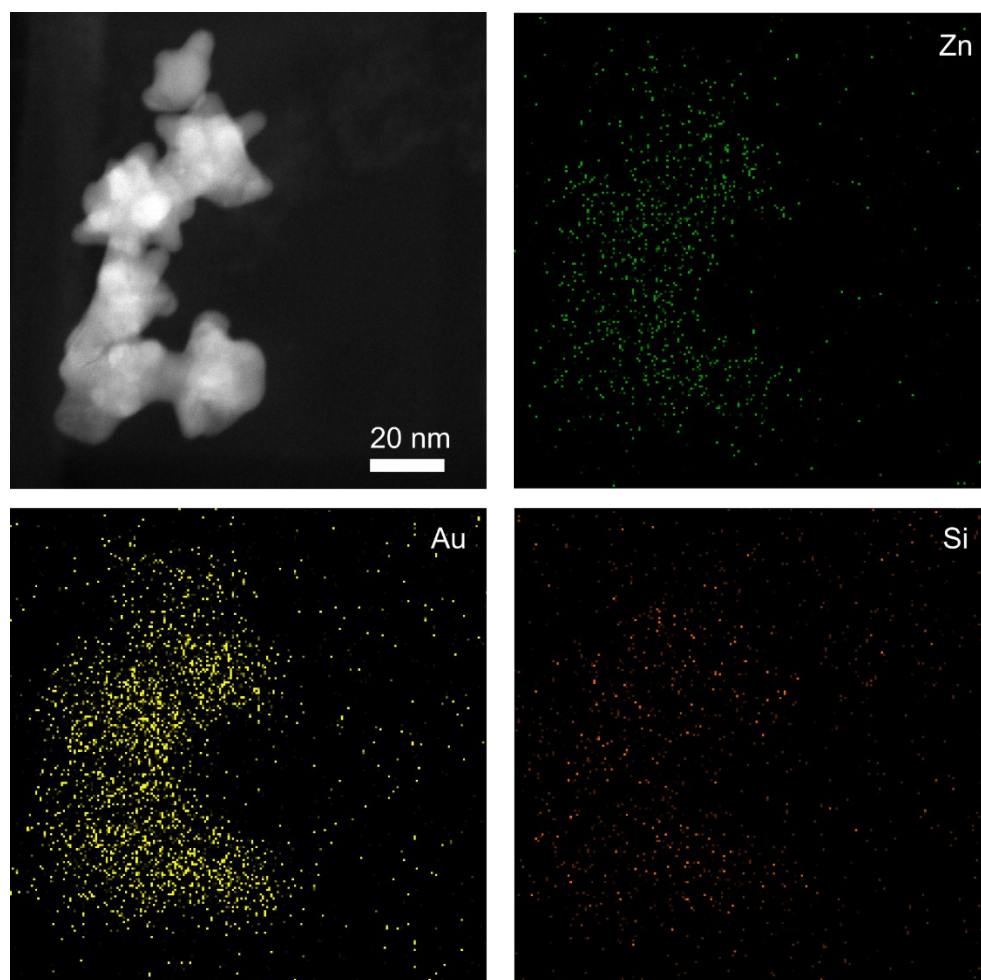
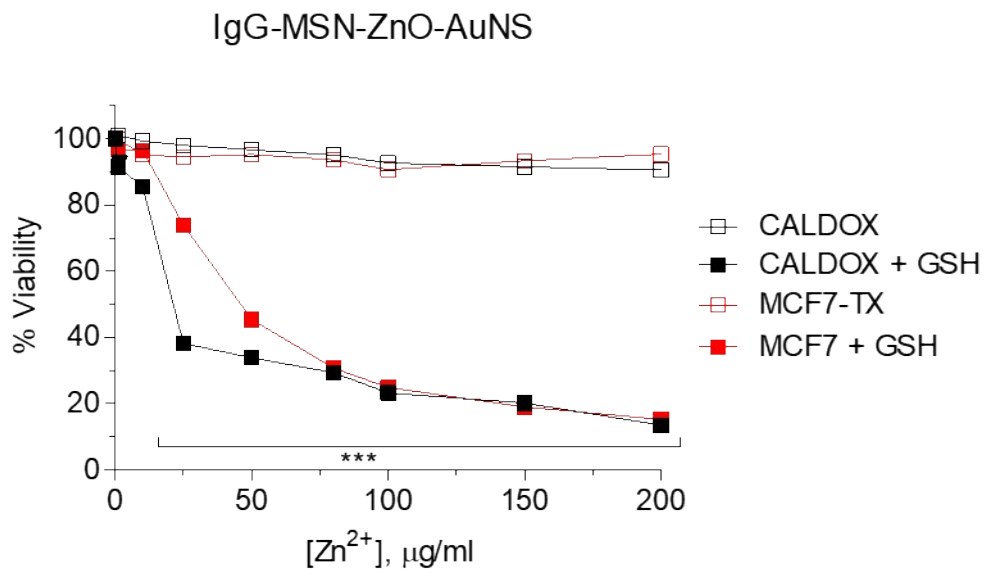


SUPPLEMENTARY FIGURES



Supplementary Figure 1. ADF-STEM image and Zn, Au and Si EDX compositional maps of the MSN-ZnO-AuNSs in the vicinity of the CAL51 cells at 2 hours.



Supplementary Figure 2. GSH activates the release of zinc ions from the IgG-MSN-ZnO-AuNSs. In the presence of GSH, the IgG-S-S-conjugated MSN-ZnO-AuNSs reduce the viability of CALDOX and MCF7-TX cells in a dose-dependent manner (WST assay, 24 h treatment). Without GSH, the IgG-MSN-ZnO-AuNSs have no significant cytotoxic effect. *** $p < 0.001$ vs. non-treated ($[Zn^{2+}] = 0$) cells, one-way ANOVA. Mean \pm SEM, $n = 3$ independent experiments.