Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

SI. Morphological characterization of CB[7]-protected AuNPs by High-Resolution Transmission Electron Microscopy.

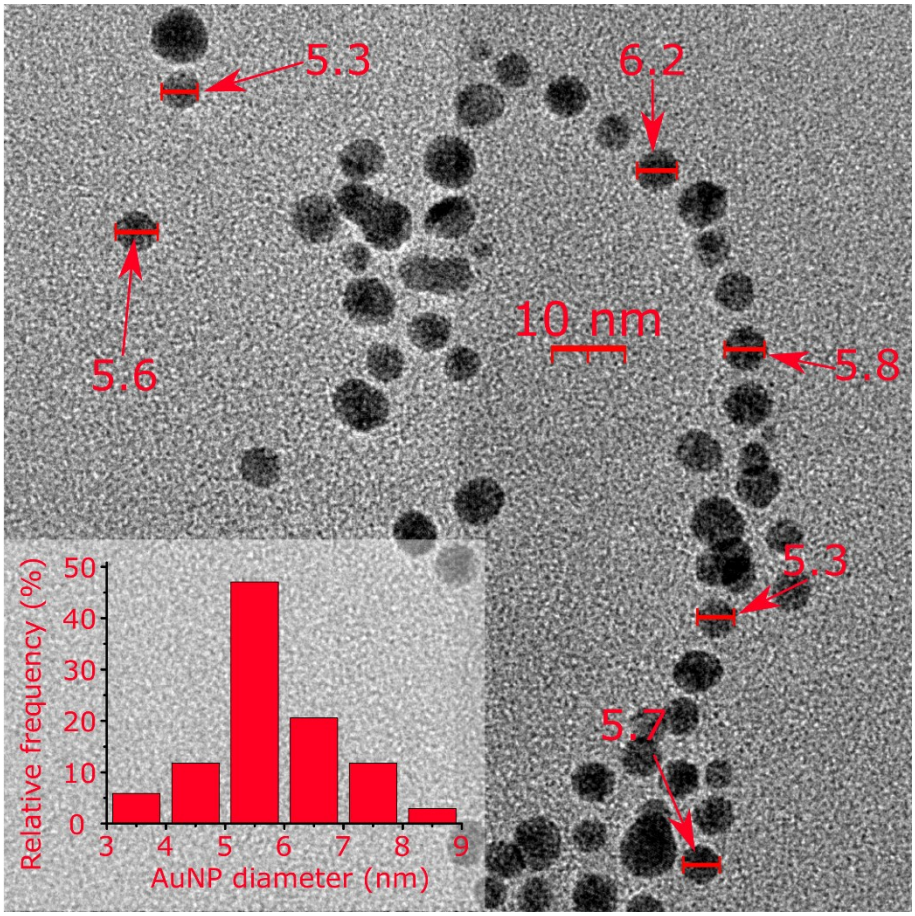

Figure S1. High-Resolution Transmission Electron Microscopic image of CB[7]-stabilized AuNPs where the shown numbers are the AuNP diameter in nm. The AuNPs diameter distribution is shown in the inset (N≥100).

SI. [1]H-NMR spectra of 4-nitrophenol (4-NP) and nitrofurantoin (NF) with cucurbit[7]uril (CB7).

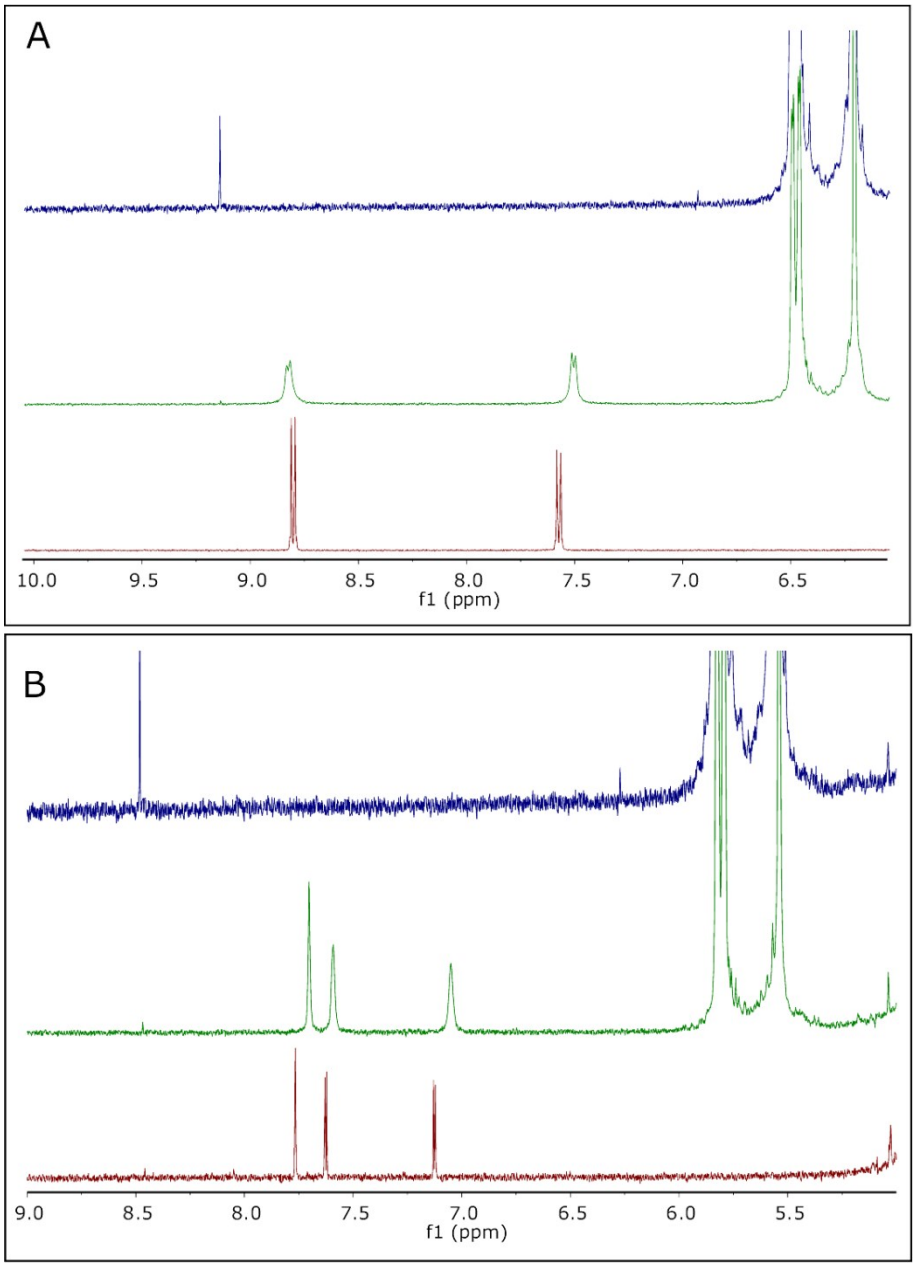

Figure S2. [1]H-NMR of 4-NP (A) and NF (B). In each plot, the upper spectrum (blue) corresponds to CB7, in the middle appears the spectrum of nitro compound:CB7 1:2 (molar ratio, green spectrum) and below the nitro compound (red).

SI. Spectrophotometric evolution of 4-NP and NF reduction.

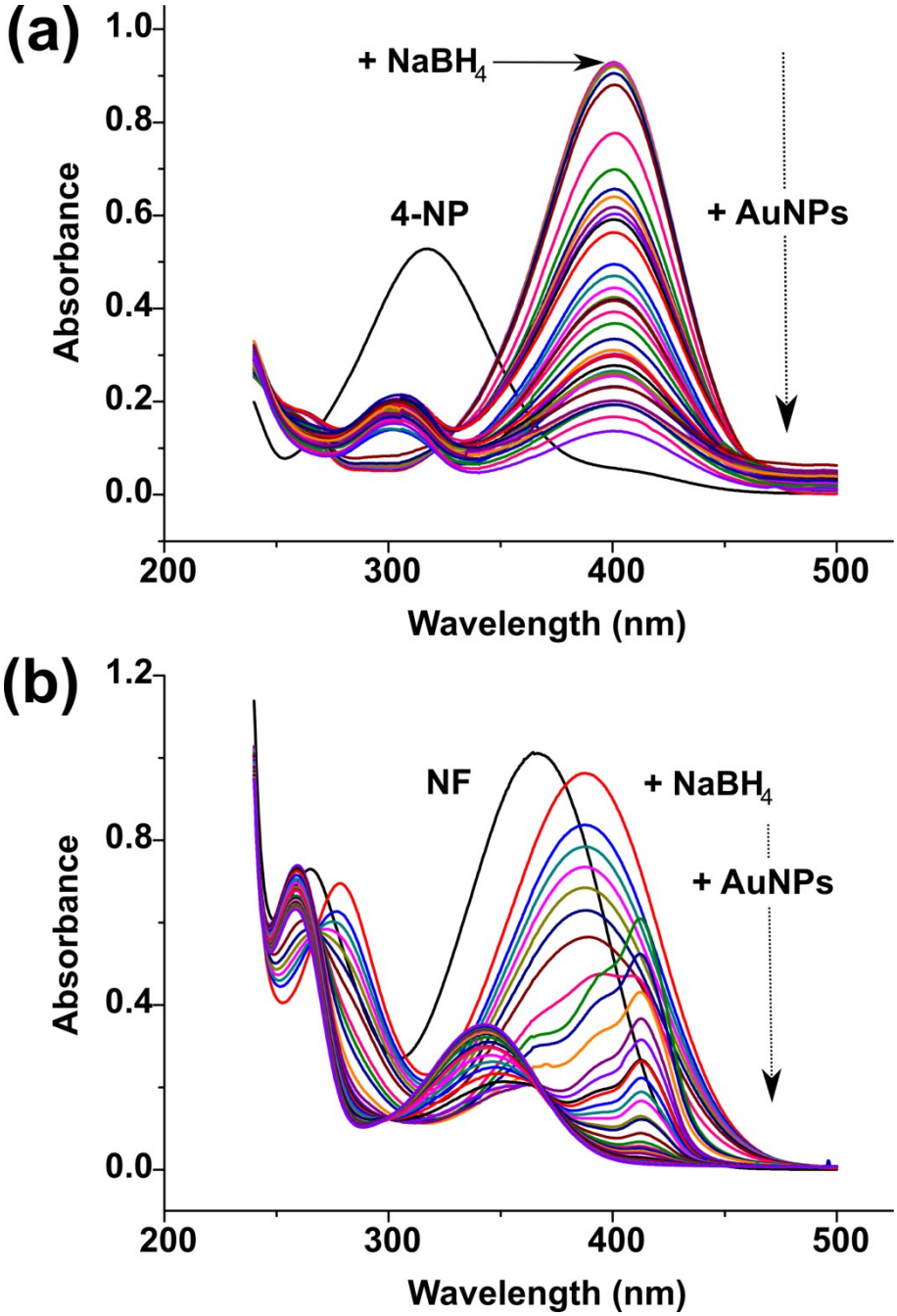

Figure S3. Representative spectra of nitro compounds catalyzed reduction. (a) 4-NP and (b) NF. 25 ºC, 0.05 mM nitro compound initial concentration, 1:46 molar ratio Au(0):nitro compound, *S* = 0.0116 m^2 L^{-1}. 10 and 5.0 mM $NaBH_4$ initial concentrations for 4-NP and NF, respectively.

SI. Signal treatment of 4-NP and NF reductions: pseudo-first order kinetics.

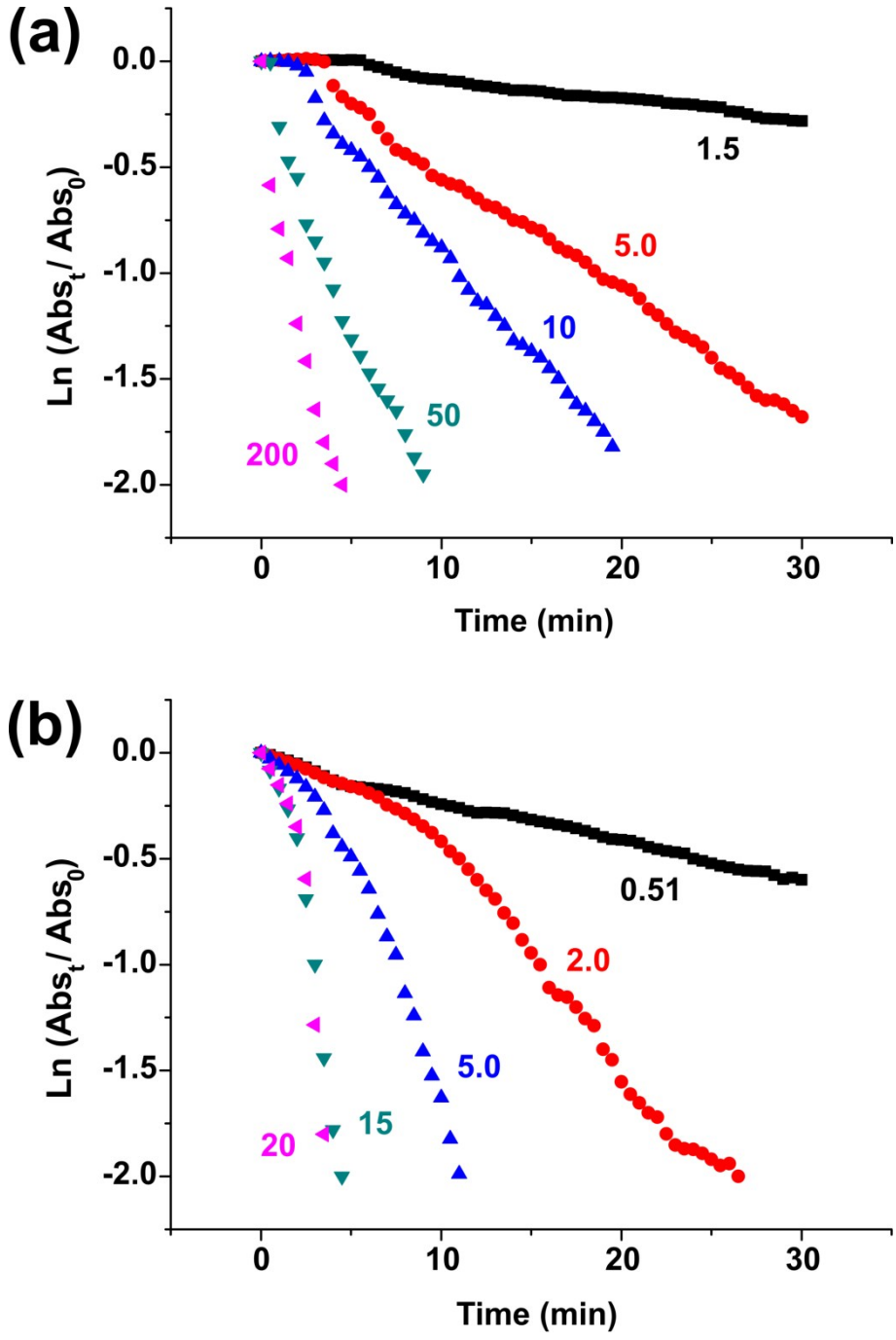

Figure S4. Graphs of Ln(Abs_t/Abs_0) versus time at 5.0×10^{-5} M nitro compound and variable $NaBH_4$ concentration, shown in the graph (mM). A) 4-NP. B) NF. 25 ºC, 1:46 molar ratio Au(0):nitro compound, $S = 0.0116$ m^2 L^{-1}.