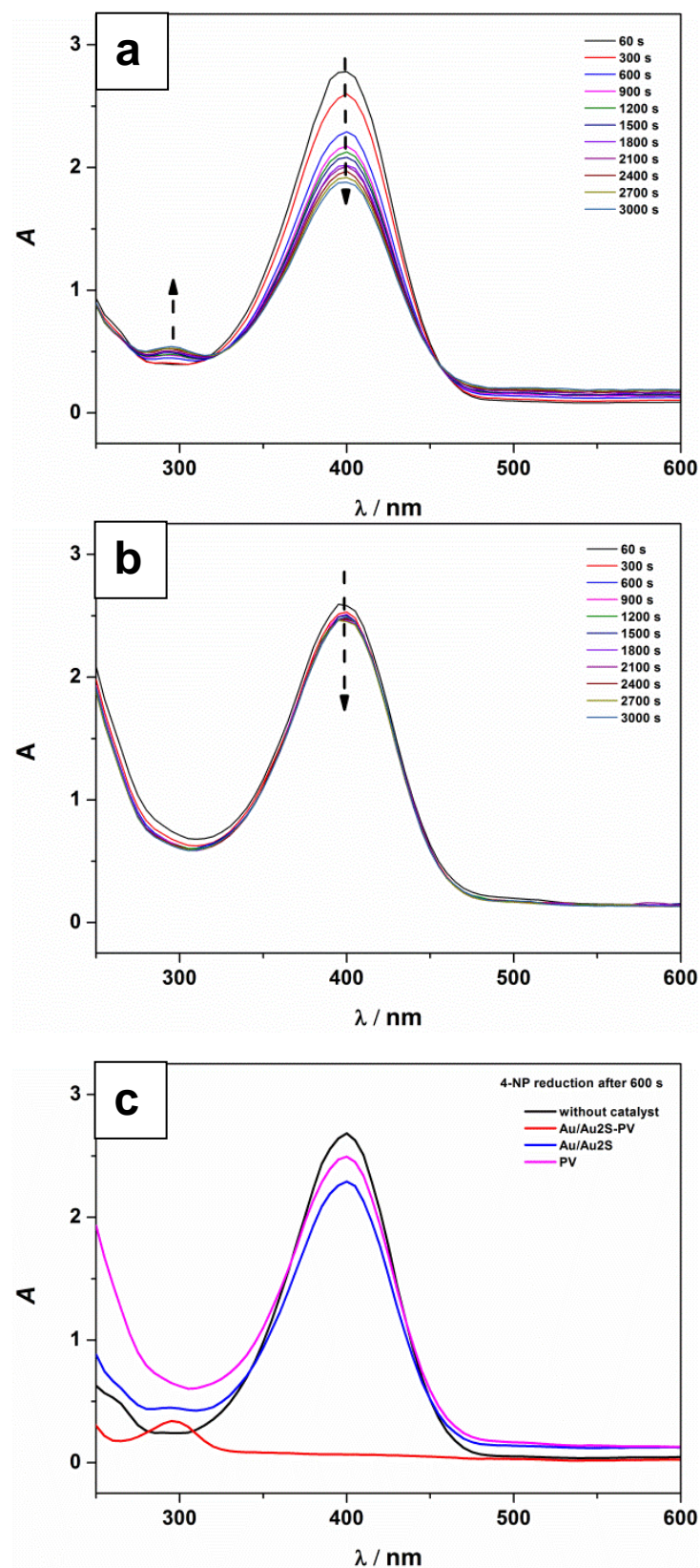


## Electronic Supplementary Information (ESI)

**Figure S1.** Successive UV-Vis spectra of the reduction of 4-NP by **a)** Au/Au<sub>2</sub>S nanoparticles and **b)** Viologen; in presence of excess NaBH<sub>4</sub>. **c)** Comparative UV-Vis spectra of 4-NP reduction after 600 s for Au/Au<sub>2</sub>S nanoparticles, Viologen and Au/Au<sub>2</sub>S-V nanocomposite.



**Fig. S2.** UV-Vis spectra of pure Au/Au<sub>2</sub>S-V nanocomposite in aqueous solution.

