

## SUPPORTING INFORMATION

### A mechanistic study of gold nanoparticles catalysis of O<sub>2</sub> reduction by ascorbate and hydroethidine, investigating reactive oxygen species formation

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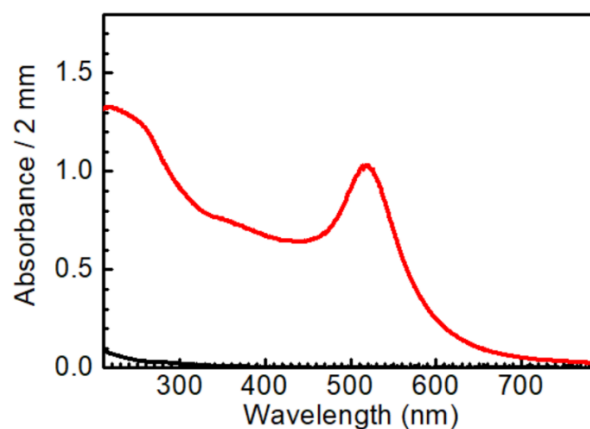


Figure S1. UV-vis absorption spectrum of AuNPs suspension containing 3 mM of gold atoms (red) and its supernatant (black). AuNPs suspension was diluted with deionized water two times before measurement.

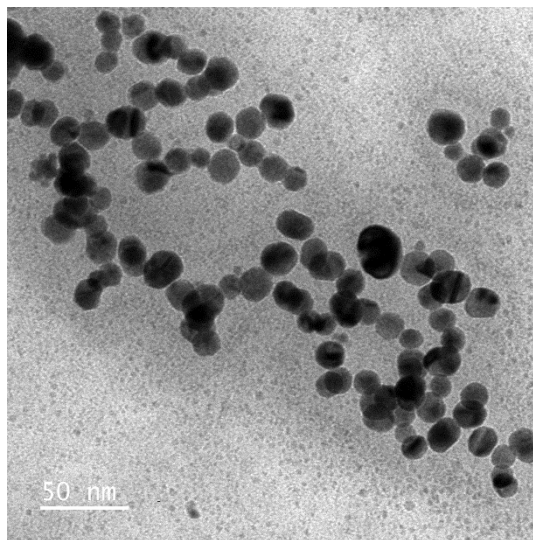


Figure S2. TEM image of AuNPs.

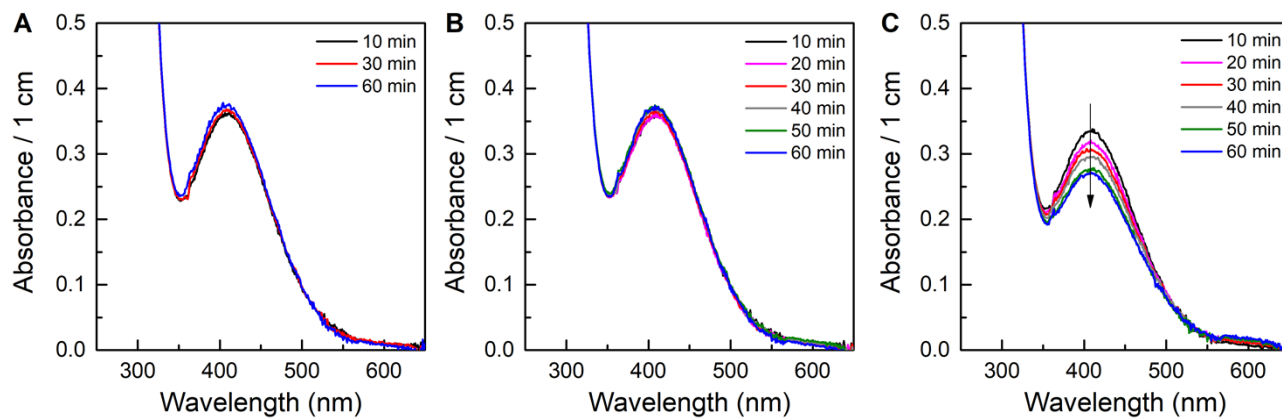


Figure S3. Determination of  $\text{H}_2\text{O}_2$  concentration by  $\text{TiOSO}_4$  assay at pH 7. Initial concentration of  $\text{H}_2\text{O}_2$  was 1 mM. A – in water. B – in supernatant solution. C – in AuNPs suspension,  $[\text{Au}] = 1.5 \text{ mM}$ .