

Supplementary Information

Glutathione-facilitated design and fabrication of gold nanoparticles-
based logic gates and keypad lock

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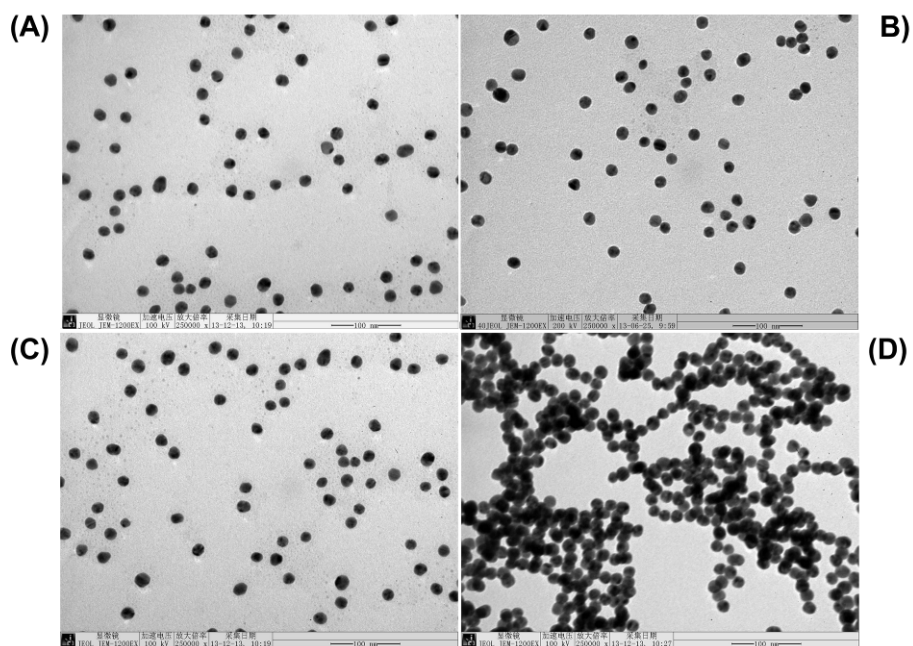


Figure S1 TEM image of a) gold NPs alone, b) gold NPs + GSH, c) gold NPs + Pb^{2+} ions and d) gold NP + GSH + Pb^{2+} ions.

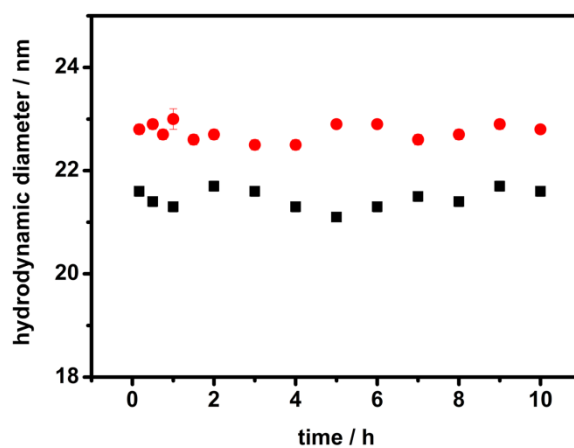


Figure S2 The DLS particle size of gold NPs alone (squares) and gold NPs +GSH (circles) incubated for various times.

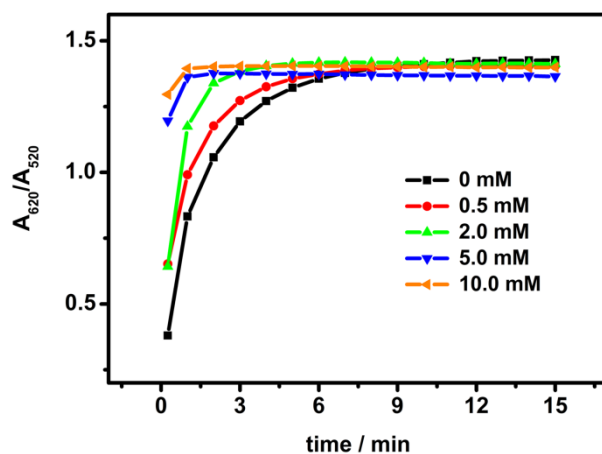


Figure S3 The effect of NaCl on the response time of AND logic gate in the presence of both GSH and Pb^{2+} ions.

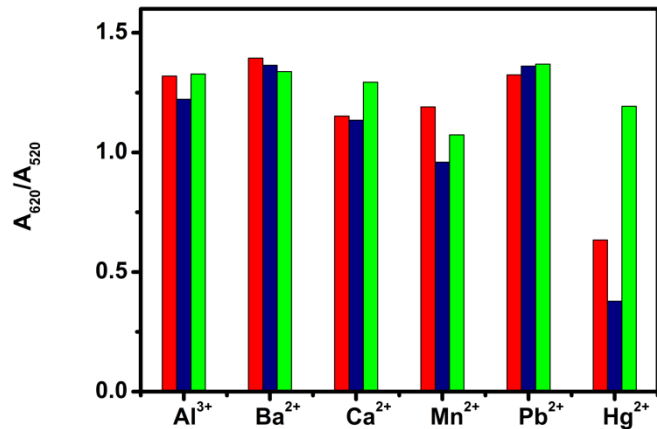


Figure S4. The effect of the input adding order on the logic output. Red: simultaneous addition of GSH and metal ions. Blue: metal ions were added first then GSH was added. Green: GSH was added first then metal ions were added.