

supplementary information

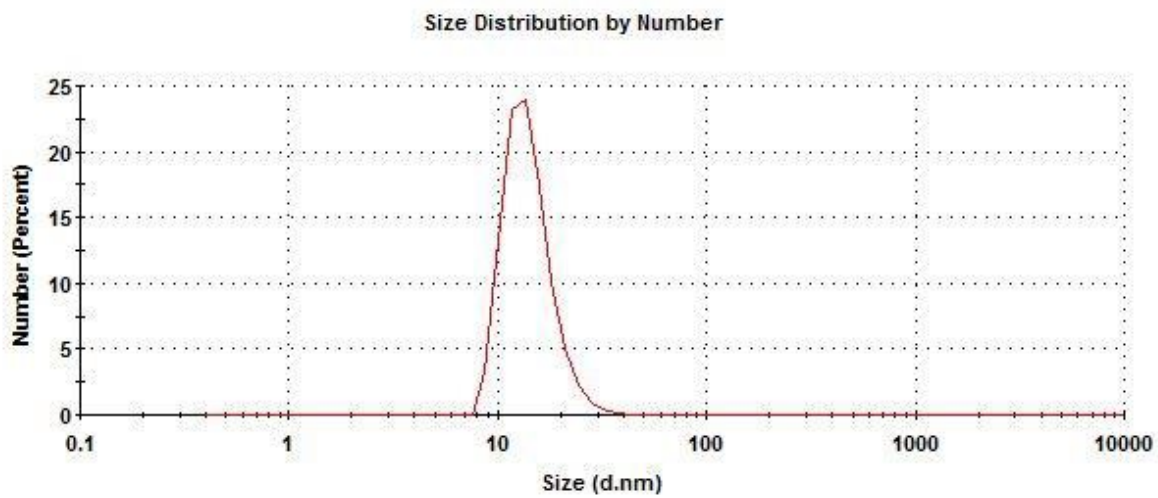


Fig1. Gold nanoparticle size distribution by number using DLS.

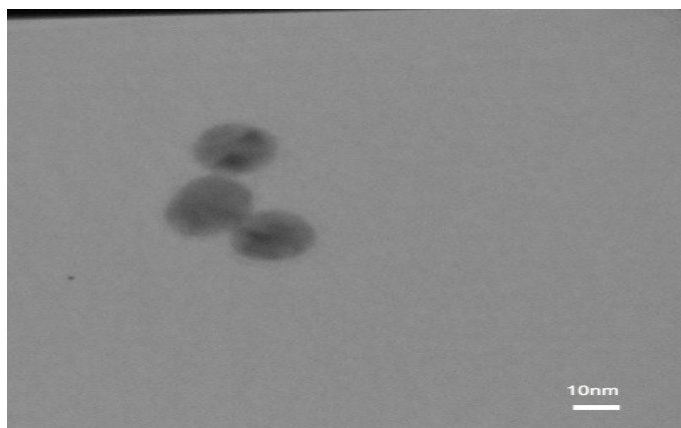


Fig2. TEM microscope image of gold nanoparticles (scale bar is 10 nm)

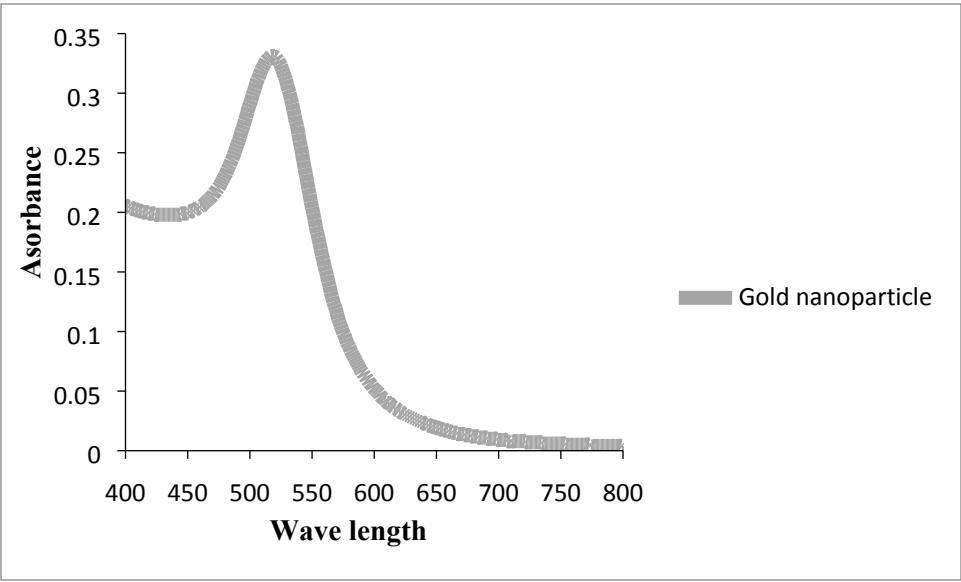


Fig 3. Absorption spectrum of gold nanoparticles

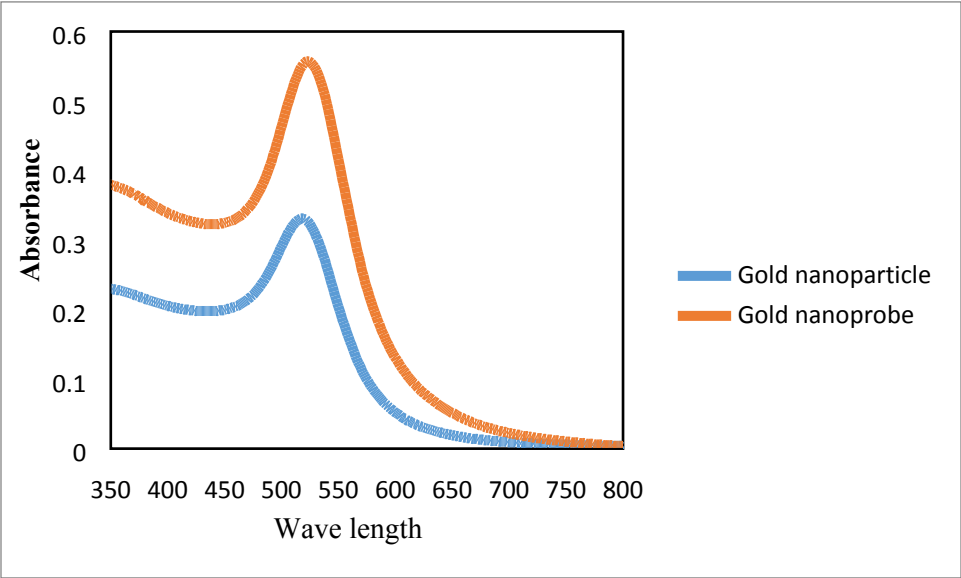


Fig4. UV-Vis spectrophotometer nanoprobe vs. nanoparticle absorption peak

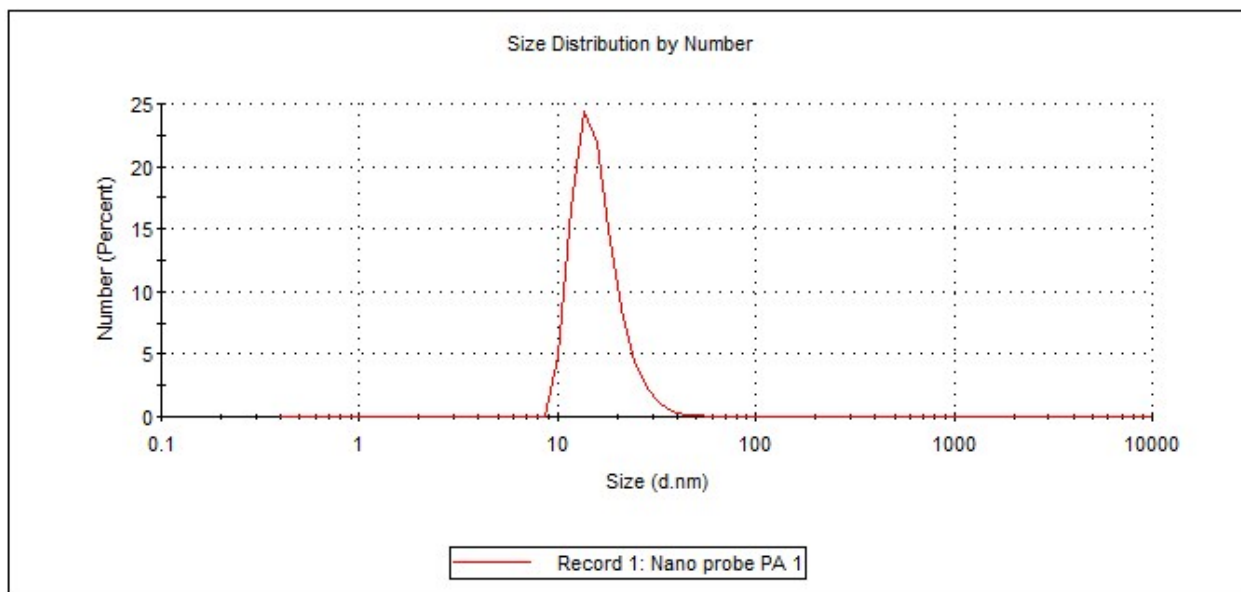


Fig5. Nano-probe size distribution by number using DLS.

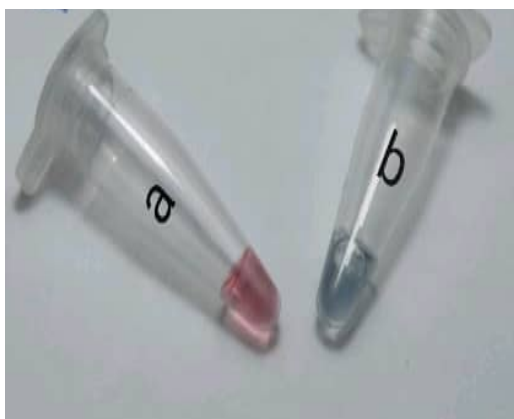


Fig6. Investigation of binding of thiol probe to gold nanoparticle surface using DTT. a) Nanoprobe (control) b) Nanoprobe solution (10 nM) after adding DTT at 16 mM concentration

Table 1 primers and probe sequences in this study

lasB	
Probe	5'-HS-(CH ₂)- AAAAAAAAAAAGAGAACAACATCGCCCAA-3'
Primers	
Forward	5'- ACGAACTGAAAGCGATCCG-3'
Reverse	5'- TTCCCACTGATCGACCACTT-3'
U.u urease	
Primers	
Forward	5'- TGCTGGTGGTACAGGTATGAA-3'
Reverse	5'- GGAGCATGTCCACCACCA-3'

Table 2 amplification program of the non-target urease gene

Stage		Temperature, c	Time,min
Primary Denaturation		95	3
Cycle number(35)	denaturation	95	0.5
	annealing	58	0.5
	extension	72	0.5
final extension		72	5
