Electronic Supplementary Material (ESI) for RSC Advances.

AuNPs based selective colorimetric sensor for cysteine at wide pH range: Investigation of capping molecule structure on the colorimetric sensing and catalytic properties

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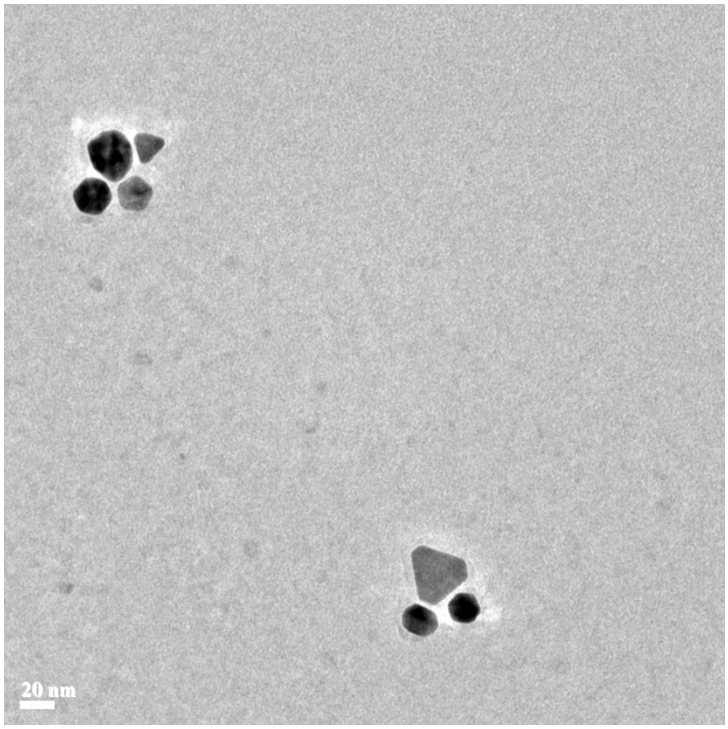

Figure S1. HR-TEM image of SDS-AuNPs.

Table 1. Zeta potential of AuNPs stabilized with different capping agents.

Compound	Zeta potential (mV)
SDS-AgNPs	-71.3
PEG-AgNPs	-14.4
PVA-AgNPs	-11.8
PVP-AgNPs	-12.4
PSS-AgNPs	-29.9
T-80-AgNPs	-13.9

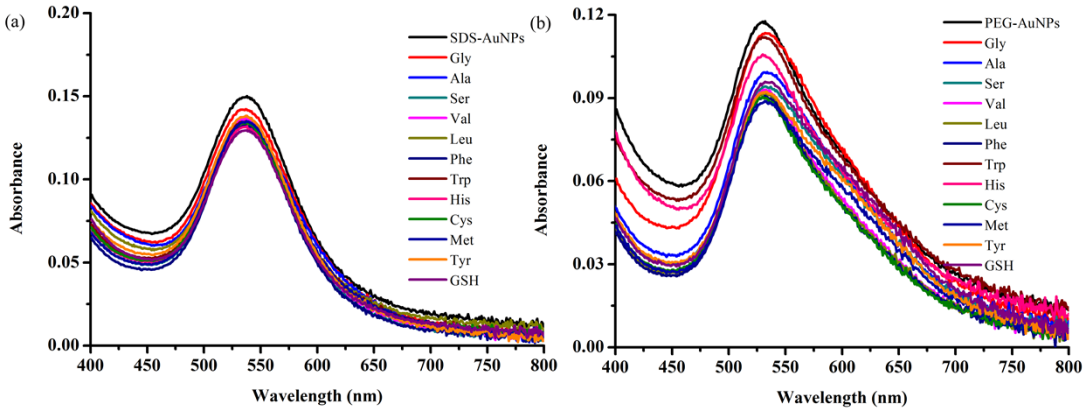

Figure S2. Absorption spectra of (a) SDS- and (b) PEG-AuNPs with different amino acids.

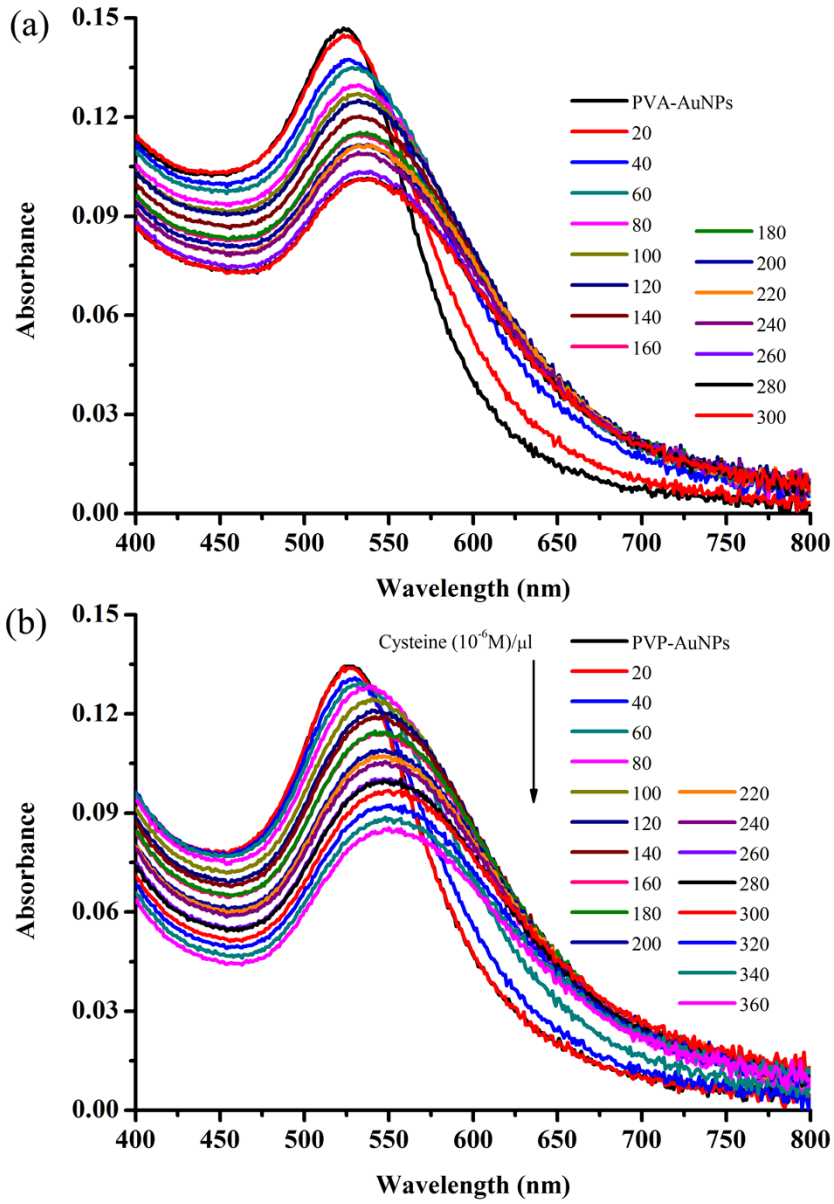

Figure S3. Change of absorption (a) PVA-AuNPs Vs cysteine and (b) PVP-AuNPs Vs cysteine.

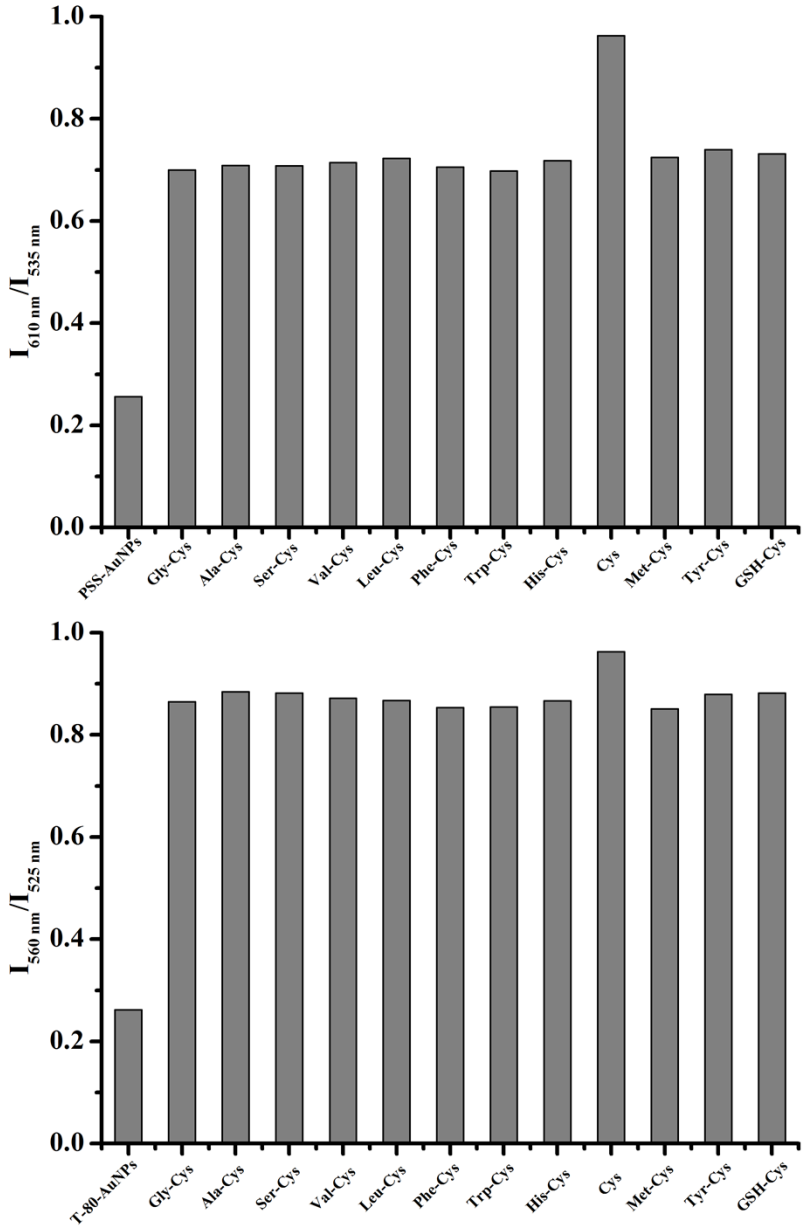

Figure S4. Cysteine colorimetric sensing (a) PSS- and (b) T-80-AuNPs in presence of different amino acids.

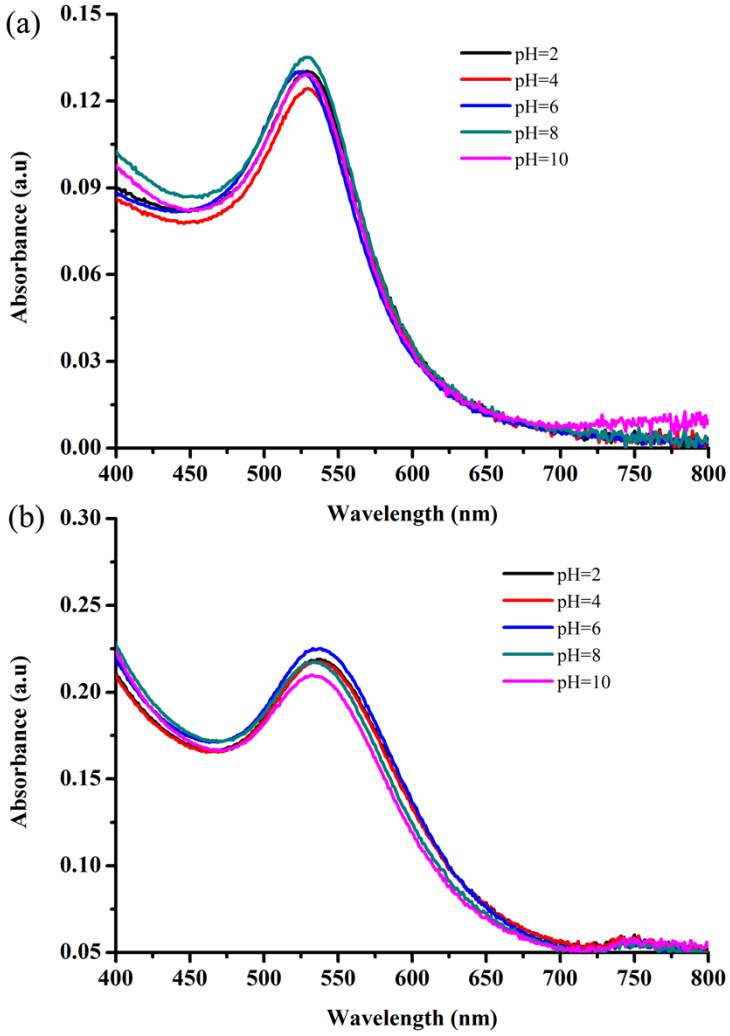

Figure S5. Absorption spectra of (a) T-80- and (b) PSS-AuNPs at different *pH*.

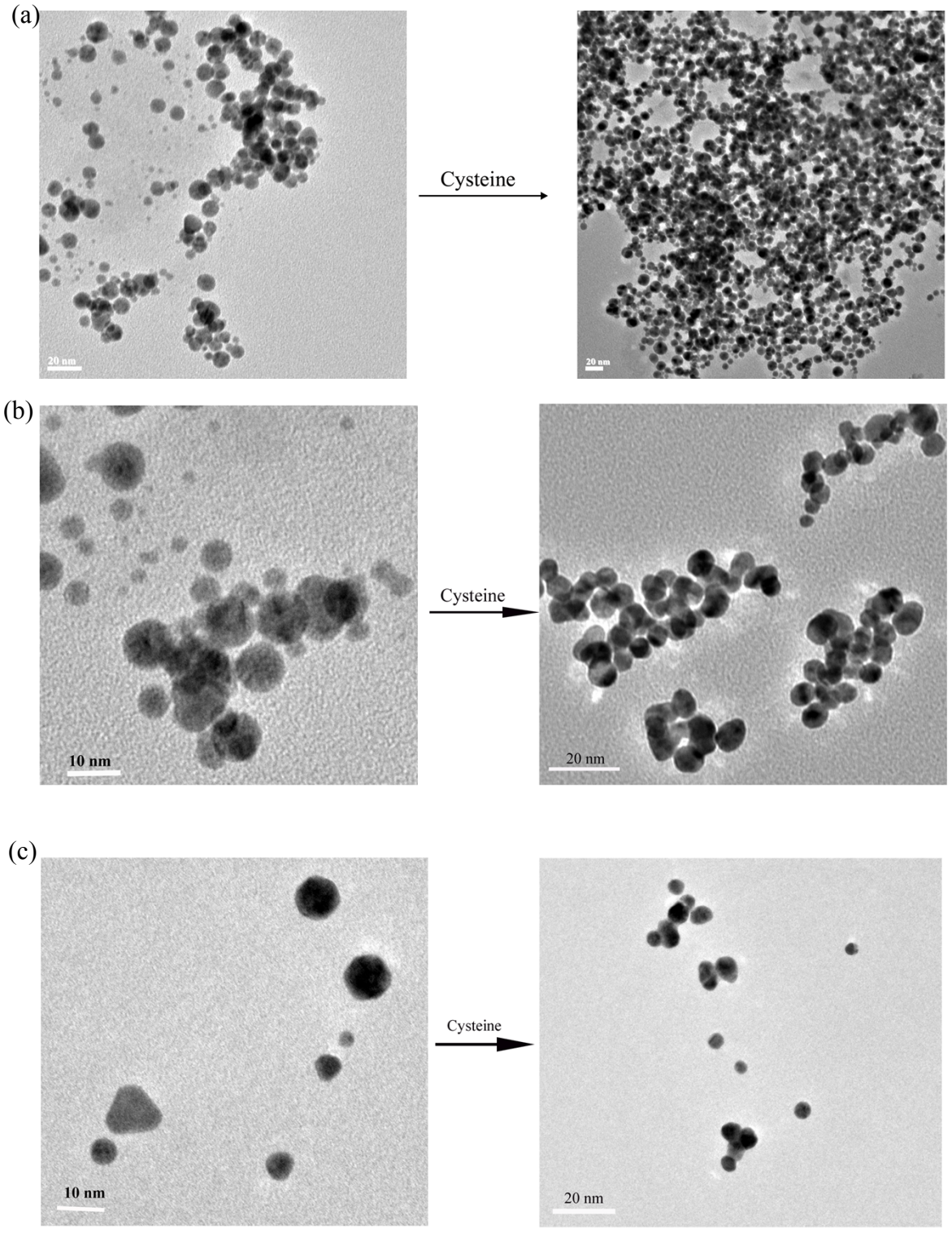

Figure S6. HR-TEM images of AuNPs of before and after addition of cysteine to (a) SDS-AuNPs (b) PVP-AuNPs and (c) T-80-AuNPs.