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Electronic Supplementary Information

Achievement of silver-directed enhanced photophysical properties of gold nanoclusters

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Figure S1: Fluorescence spectra of Au-DA during (A) time and (B) temperature variation. λ_{ex} = 360 nm.



Figure S2: (A) Fluorescence and (B) absorption spectra of DA under oxidized conditions. λ_{ex} = 360 nm.



Figure S3: FTIR spectra of DA and Au-DA.



Figure S4: (A) TEM image of Au-L-DOPA. (B) Fluorescence spectra of products of the reaction where (a) glutathione, (b) cysteine and (c) octadecanethiol has been used as ligands.



Figure S5: (A) Excitation spectra of AuAgDA. λ_{em} = 417 nm. (B) Absorption spectra for DA-Au-Ag with different concentration ratio of Au(III) and Ag(I) in the reaction medium. (C) MALDI-Mass spectra of AuAgDA.



Figure S6: (A) Emission intensity vs. time and (B) emission maximum vs. time plot of AuAgDA to check the stability of AuAgDA with respect to emission property. $\lambda_{ex} = 320$ nm.



Figure S7: Emission spectra of particles produced on different order of addition of precursor moieties during reaction. $\lambda_{ex} = 320$ nm.





Figure S8: (A) Absorption spectra of DA, DA-Au(III) and DA-Au(III)-Ag(I) solutions at room temperature without stirring. (B) TEM image of DA-Au(III)-Ag(I) particles.

Compound	$\tau_1(ns)$	τ_2 (ns)	α_1	α ₂	χ^2	$\tau_{avg}(ns)$
						[upto two decimal]
AuDA	3.024	3.036	33.24	66.76	1.03	3.03
AuAgDA	8.92	6.308	29.09	70.91	0.967	7.068

Table 1: Lifetime components of different nanoclusters.