

1 **Electronic Supplementary Information (ESI)**

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3 **Tuning of resonance energy transfer from 4',6-diamidino-2-**
4 **phenylindole to ultrasmall silver nanocluster across lipid bilayer[†]**

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† Electronic supplementary information (ESI) available.

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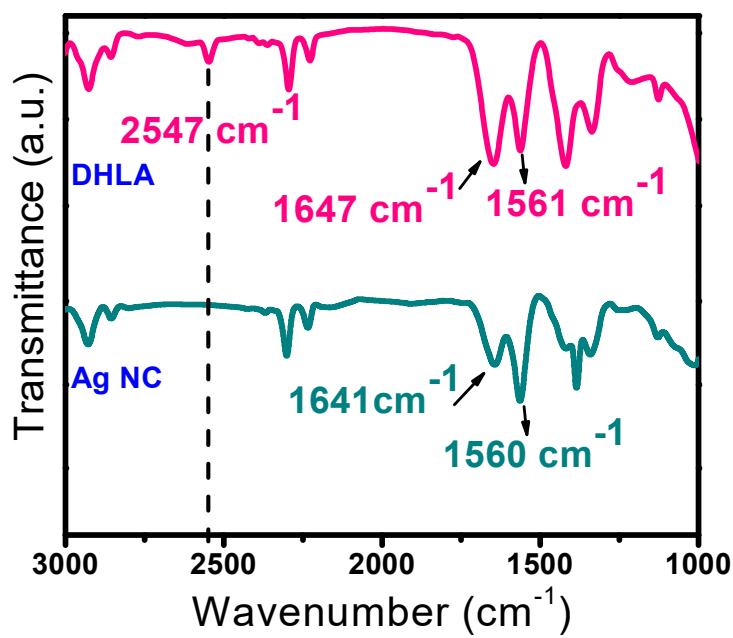


Fig. S1 FTIR spectra of dihydrolipoic acid (DHLA) and synthesized DHLA-capped Ag NC.

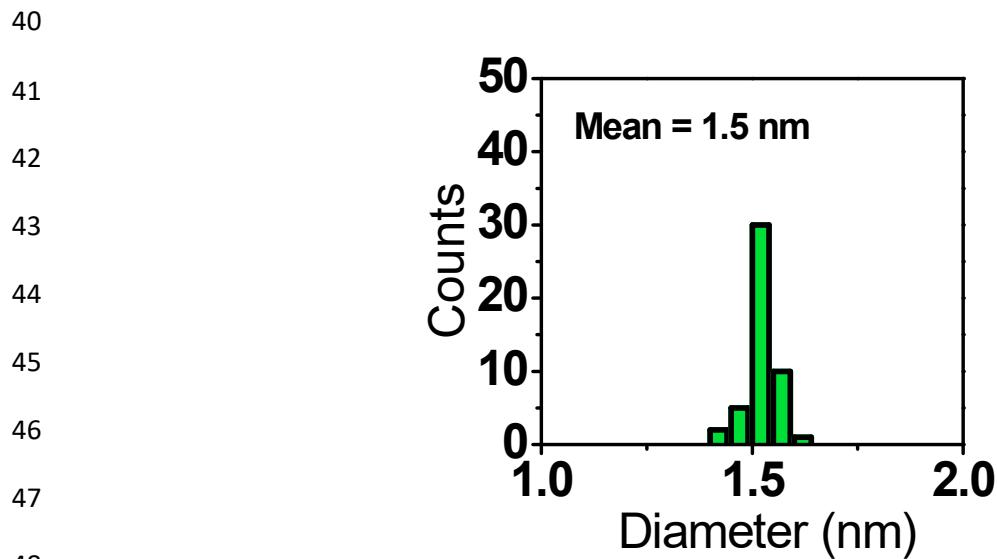


Fig. S2 Size distribution histogram of Ag NC estimated from HRTEM measurements.

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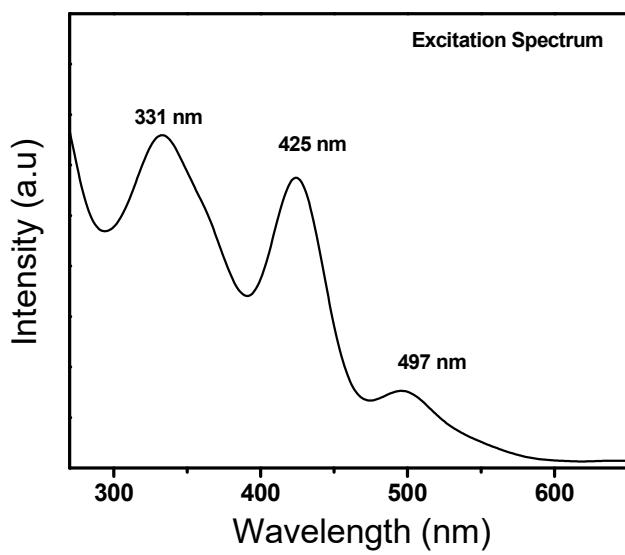
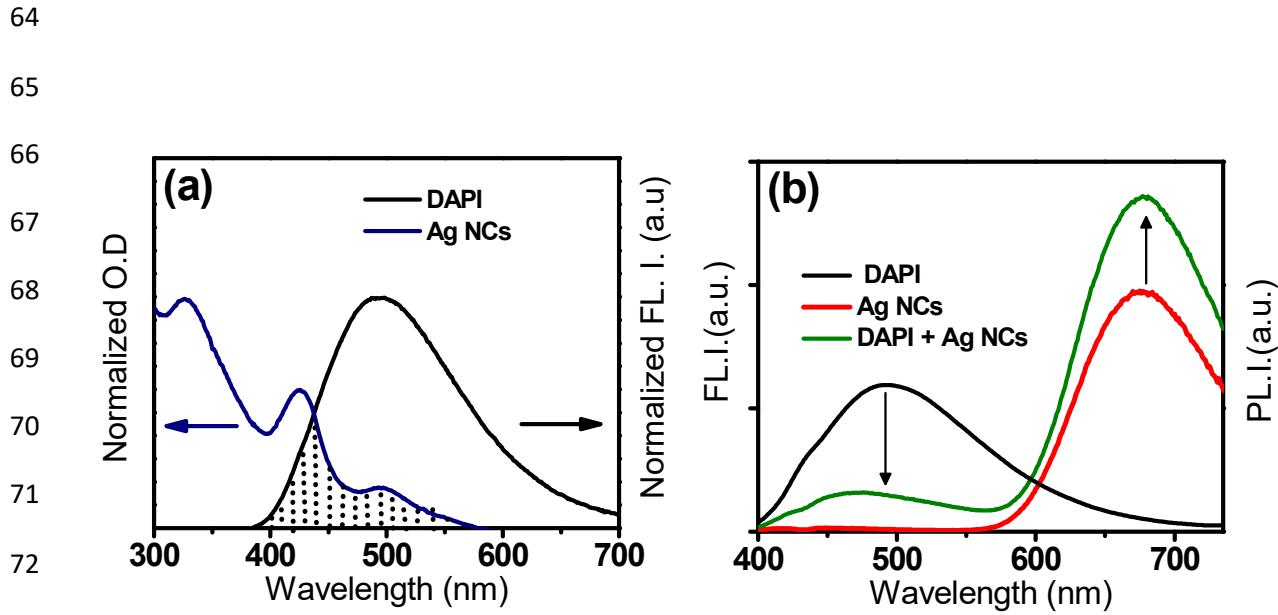


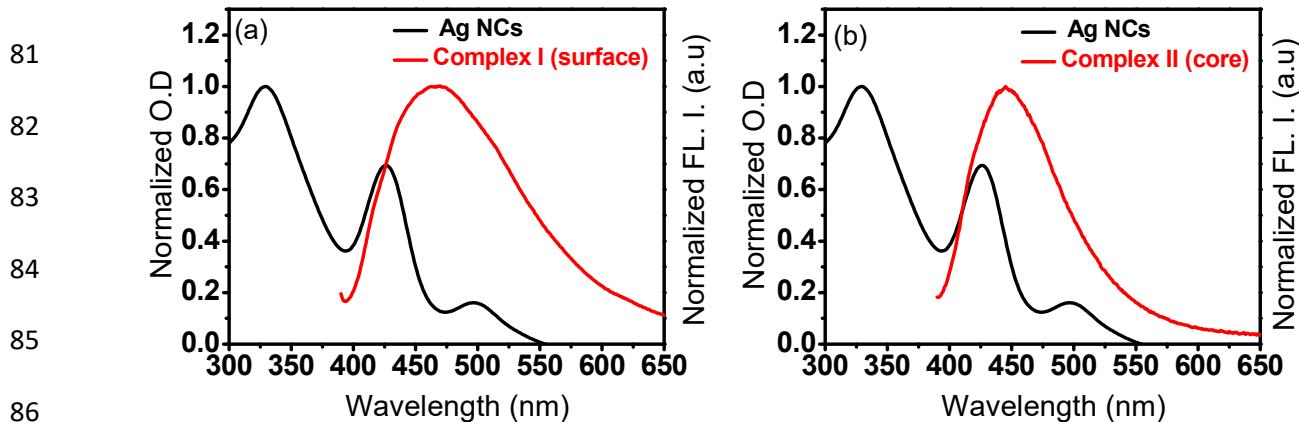
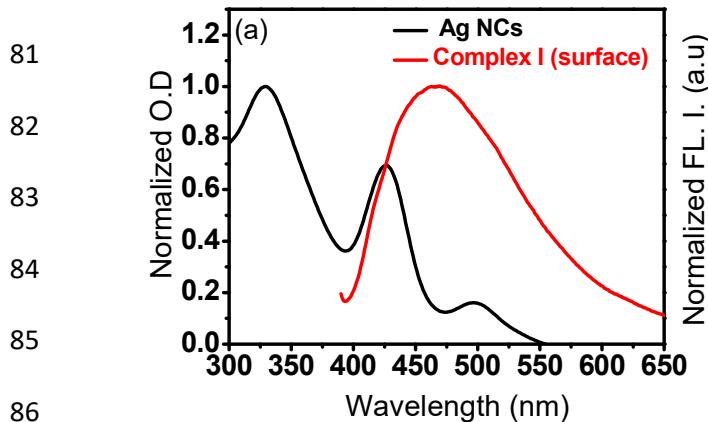
Fig. S3 Excitation spectrum of Ag NC recorded at 675 nm emission wavelength.



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 74 **Fig. S4** (a) Normalized absorption spectrum of Ag NC (blue line) and fluorescence spectrum
 75 (black line) of 2.5 μ M DAPI (λ_{ex} = 375 nm). The black dotted region shows the spectral overlap
 76 between the absorption spectrum of Ag NC and fluorescence of DAPI. (b) Changes in the
 77 emission spectra of DAPI (black line) and Ag NC (red line) upon mixing (green line). The
 78 excitation wavelength is 375 nm.

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88 **Fig. S5** Spectral overlap of (a) Complex I (surface)-Ag NC and (b) complex II (core)-Ag NC.