Electronic Supporting information

Revival, enhancement and tuning of fluorescence from Coumarin 6: combination of host-guest chemistry, viscosity and collisional quenching

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Experimental Section

Materials and Methods

Coumarin 6 and β-cyclodextrin were bought from Sigma-Aldrich, WI, USA and used as received. Stock solution of the dye was prepared in methanol. Final concentration (0.7×10^{-3} M) of this stock solution was calculated from its absorption spectrum. Concentration of the experimental solutions, prepared in different solvents using 1% of the methanol stock, was 1×10^{-6} M. Double distilled water was used throughout the experiments. Other chemicals used were bought from Merck, India.

The steady state measurements were done on a Cary 300 Bio spectrophotometer from Agilent and a QM40 spectrofluorimeter from PTI. The FESEM images were recorded in Carl Zeiss SUPRA 55VP FESEM. The epifluorescence images were taken using a LSM 710 with microscope axio observer Z.1, Carl Zeiss. Steady state fluorescence anisotropy (r) was calculated using:

$$r = (I_{VV} - GI_{VH})/(I_{VV} + 2GI_{VH})$$

where, G factor is defined as $G = I_{HV}/I_{HH}$; I_{VV} and I_{VH} represent the intensities from the excitation and emission polariser in vertical positions and vertical and horizontal positions, respectively.

Synthesis and Characterization of Silver Nanoparticles

5.5 mg silver nitrate was dissolved in10 ml of distilled water in a test tube. After dissolving $AgNO_3$, 5 mg of freshly prepared sodium borohydride solution was slowly added through the wall of the test tube and was vigorously shaken. Appearance of golden color indicated formation of silver nanoparticles.
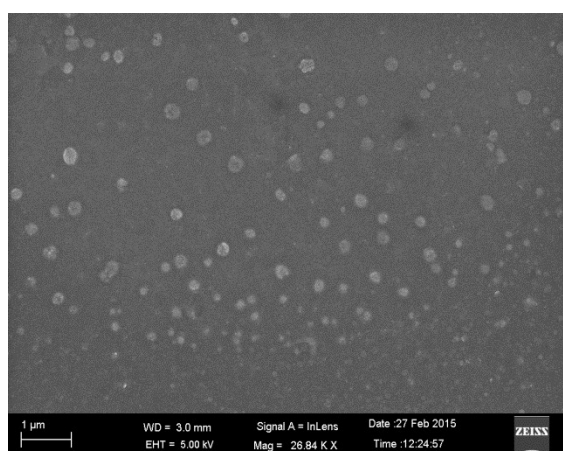

Figure S1. SEM image of silver nanoparticles.