Supporting Information for

Silver nanoclusters functionalized by chromotropic acid and layered double hydroxides for turn-on detection of melamine

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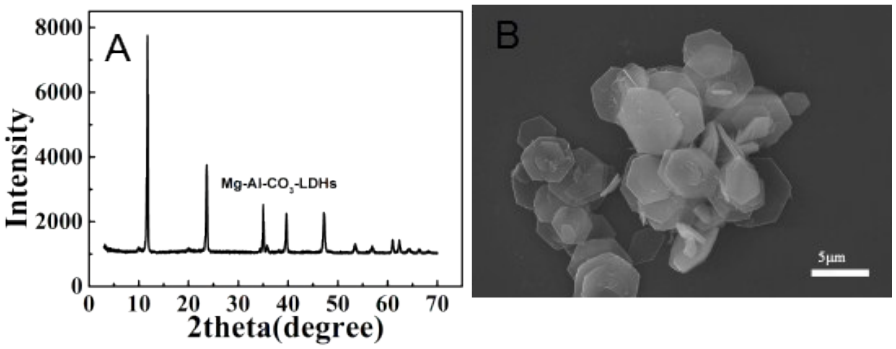

Fig. S1 (A) The XRD pattern and (B) SEM image of MgAl-LDH

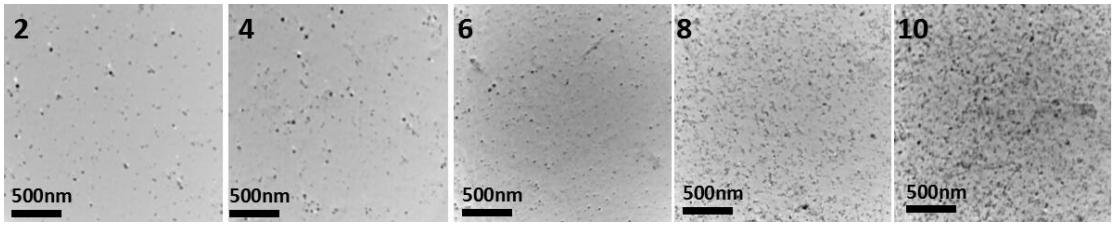

Fig . S2 TEM of $(CTA\text{-}AgNCs/LDH)_n$ UTFs with different *n* (*n* varies from 2 to 10)

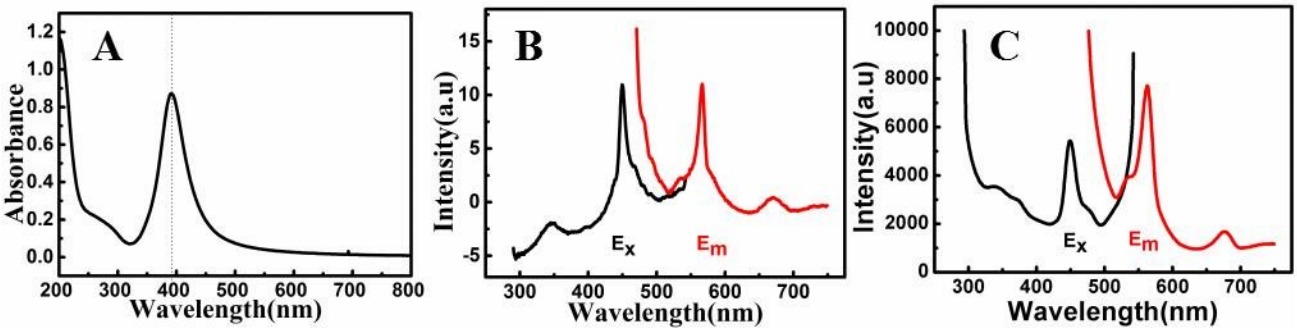

Fig. S3 (A) UV−vis spectrum of SDS-AgNCs solutions, (B) excitation and emission spectra of SDS-AgNCs solutions and (C) excitation and emission spectra of (SDS-AgNCs/LDH) UTFs

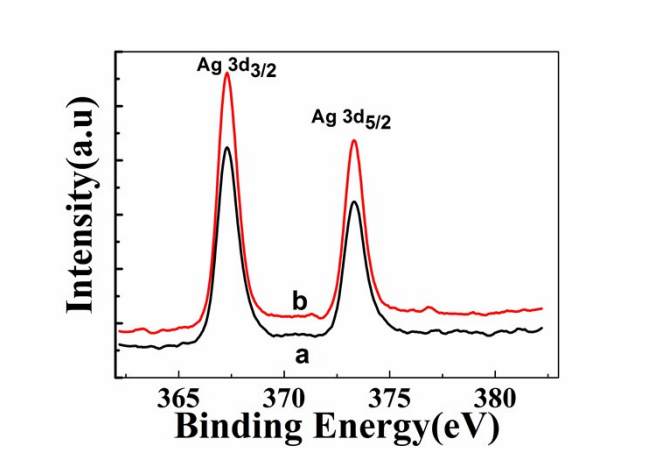

Fig. S4 XPS spectrum of CTA-AgNCs solution (a) and CTA-AgNCs/LDH UTFs (b)

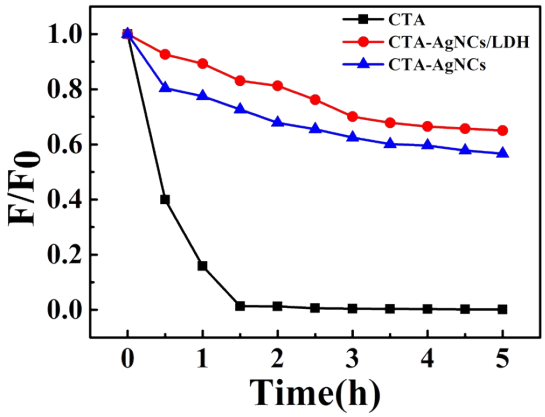

Fig. S5 Fluorescence intensity changes of (CTA-AgNCs/LDH) UTFs, CTA-AgNCs and CTA solution after exposure of ultraviolet lamp.

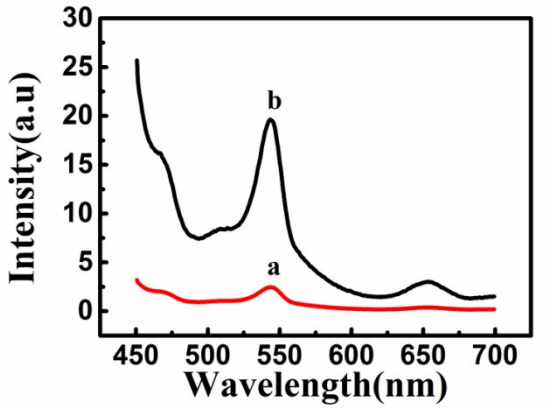

Fig. S6 Fluorescence spectra of CTA-AgNCs solution (a) and CTA-AgNCs with addition of 1.0μM melamine (b).

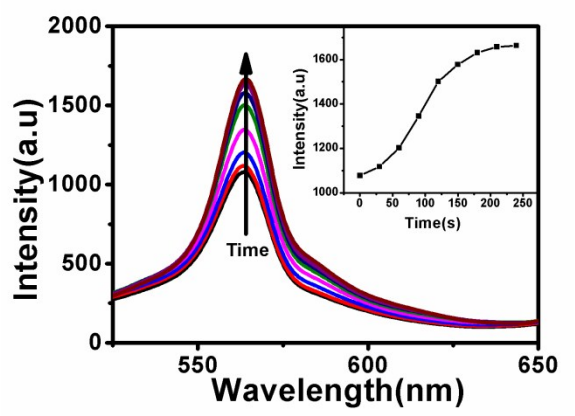

Fig. S7 Fluorescence spectra of $(CTA\text{-}AgNCs/LDH)_{10}$ UTFs in the presence of 0.1μM melamine with different reaction time (t=0-240s). The inset plot shows the fluorescence intensity at 565nm varying with the reaction time.

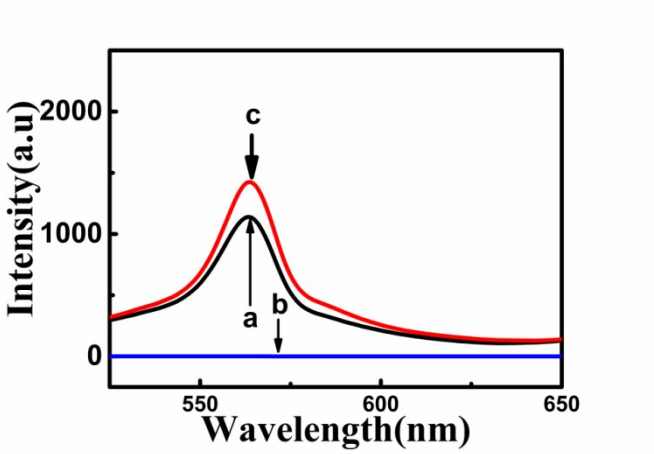

Fig.S8 Fluorescence spectra of $(CTA\text{-}AgNCs/LDH)_{10}$ UTFs (a), $(CTA\text{-}AgNCs/LDH)_{10}$ with addition of different analytes mixture (b) and $(CTA\text{-}AgNCs/LDH)_{10}$ with addition of analytes mixture containing melamine (c)