Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting information of
One-step eco-friendly approach for the fabrication of synergistically engineered fluorescent copper nanoclusters: Sensing of Hg^{2+} ion and cellular uptake and bioimaging properties

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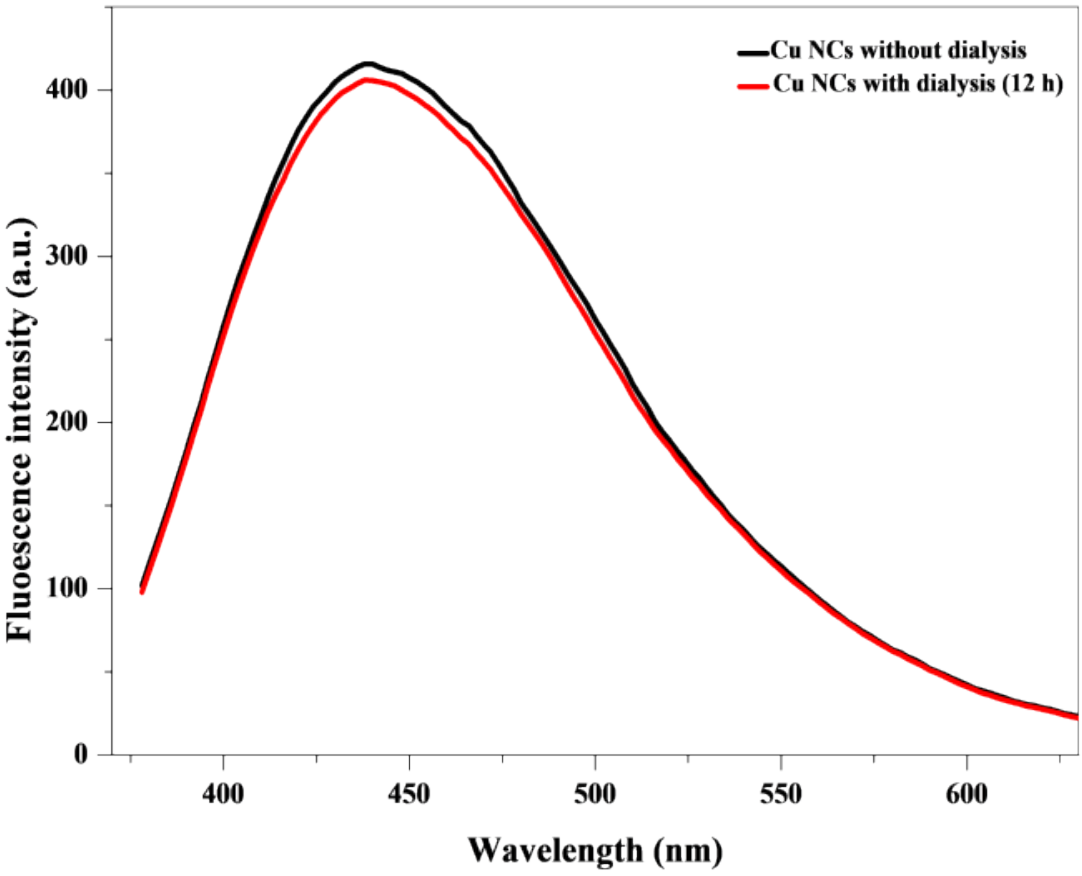

Figure S1. Fluorescence emission spectra of Cu NCs before and after dialysis (12 h).

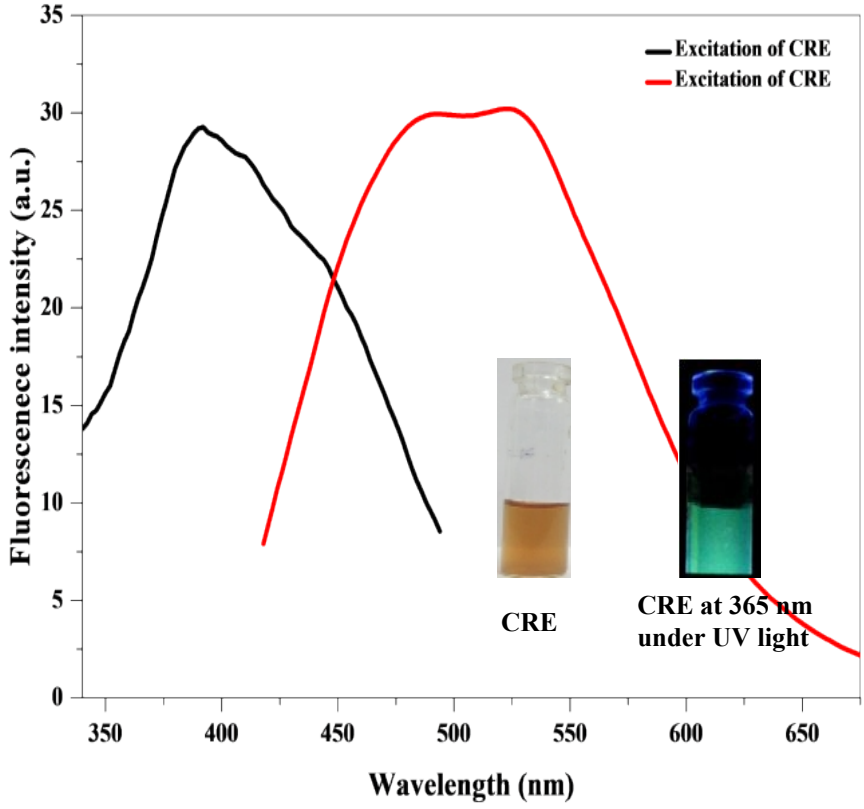

Figure S2. Fluorescence excitation and emission spectra of fluorescent CRE (Inset image under day light and under UV light at 365 nm).

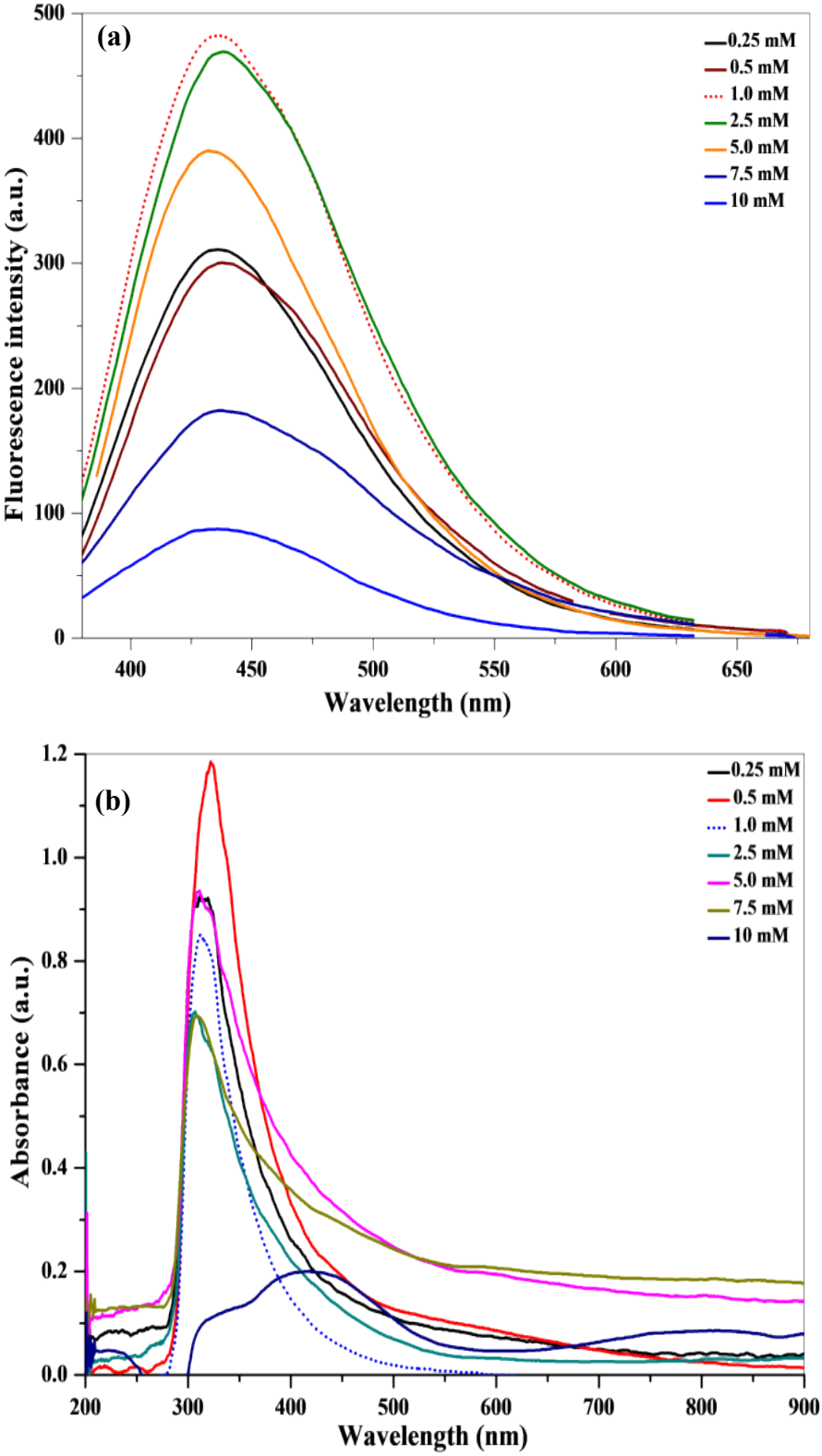

Figure S3. (a) Fluorescence emission and (b) UV-visible absorption spectra of Cu NCs at different concentrations of Cu SO_4 from 0.25-10 mM .

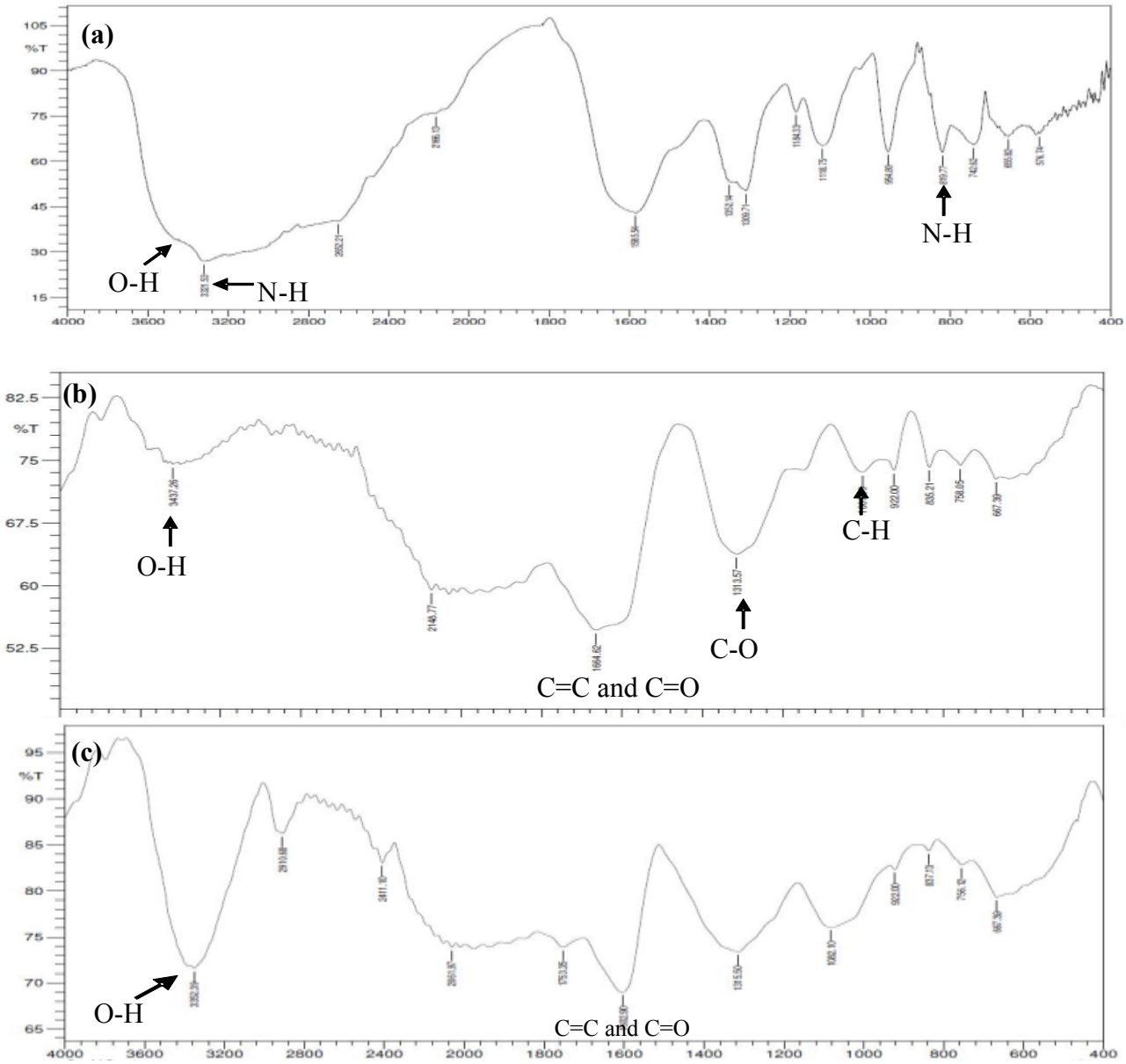

Figure S4. FT-IR spectra of (a) hydrazine hydrate (b) CRE and (c) fluorescent Cu NCs.

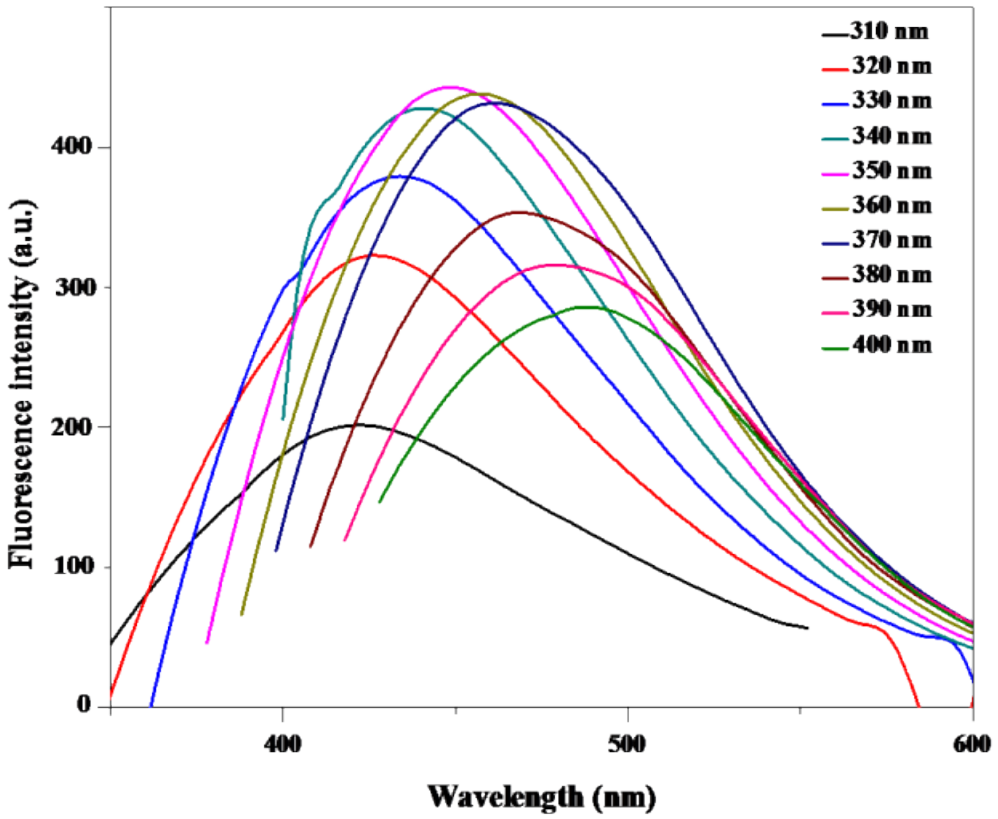

Figure S5. Fluorescence emission spectra of Cu NCs at different excitation wavelength from 310-400 nm.

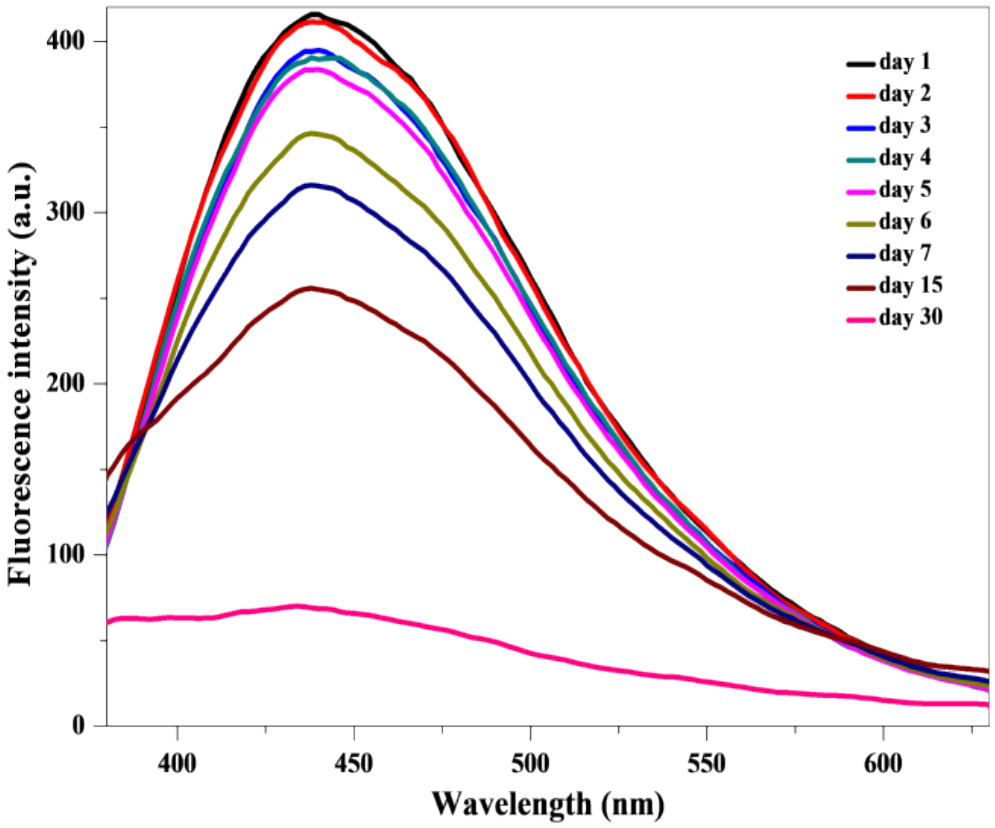

Figure S6. Fluorescence emission spectra of Cu NCs at different time intervals from 1 -30 days.

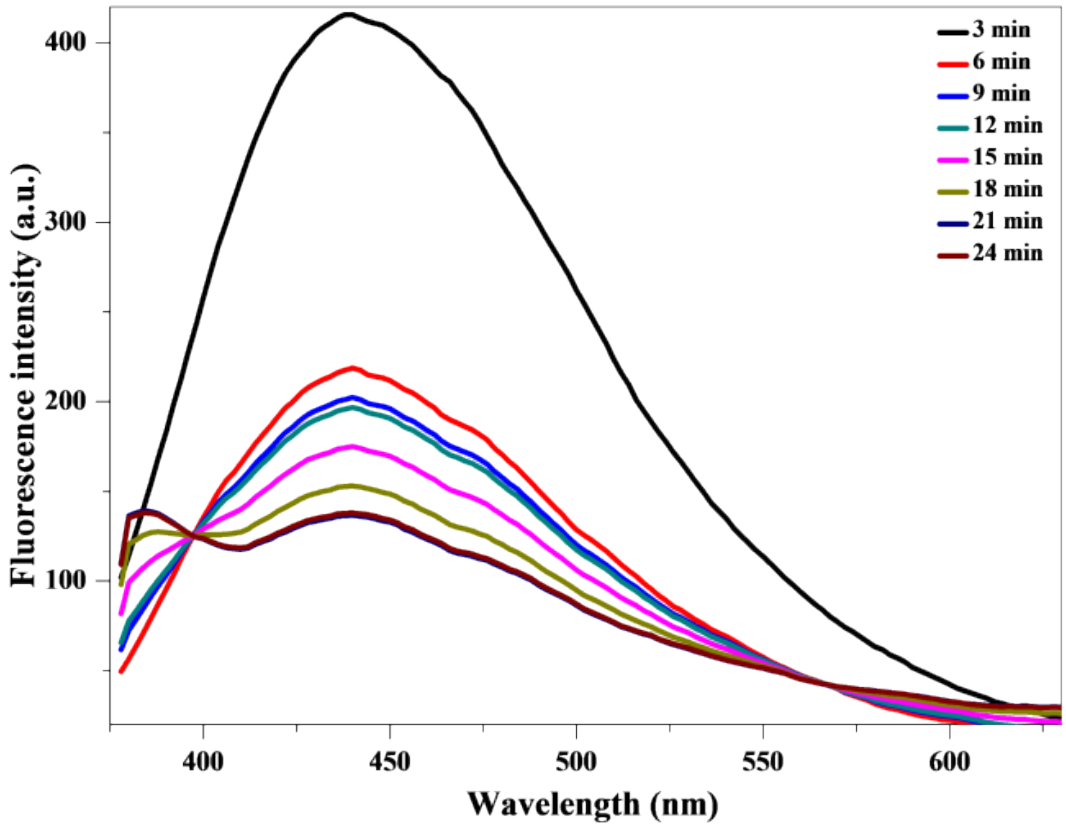

Figure S7. Time dependent fluorescence emission spectra of Cu NCs after addition of 25 μM Hg^{2+} ion from 3-24 min.

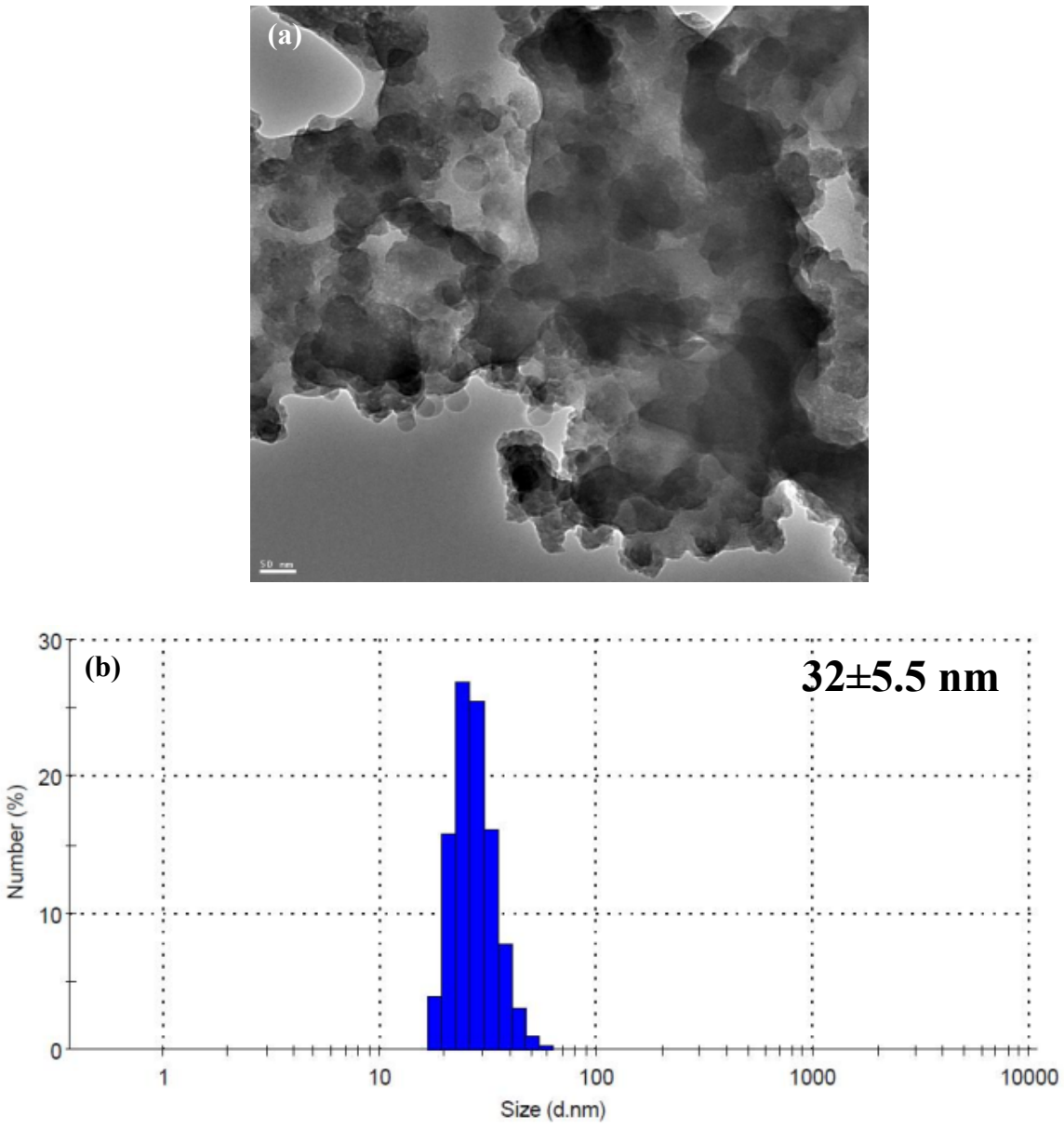

Figure S8. (a) HR-TEM and (b) DLS data of fluorescent Cu NCs with Hg^{2+} ion (25 μM).

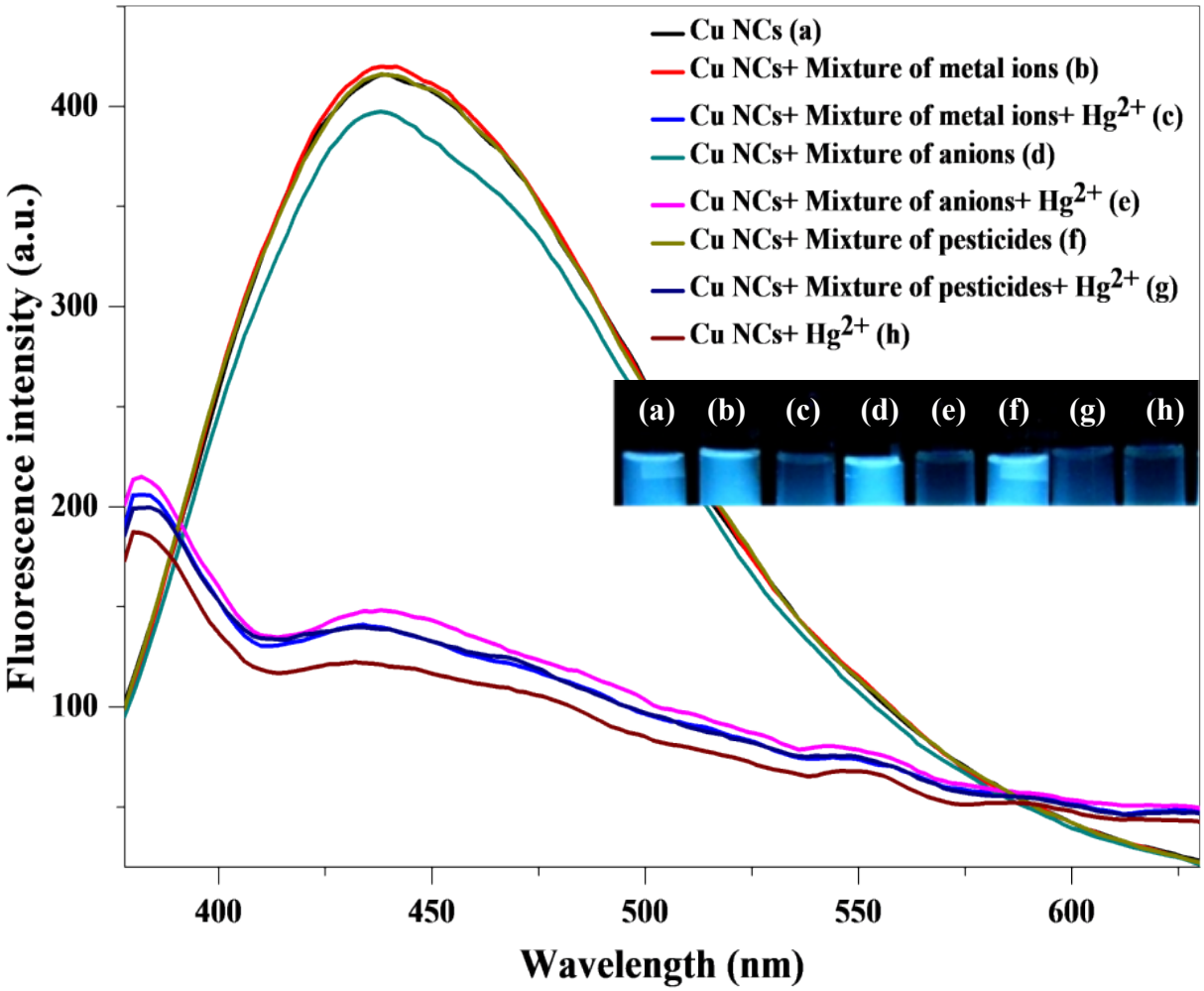

Figure S9. Fluorescence emission spectra of Cu NCs with Hg^{2+} ion in the presence of various interfering chemical species (metal ions- Pb^{2+}, Co^{2+}, Mn^{2+}, Ni^{2+}, Zn^{2+}, Mg^{2+}, Cd^{2+}, As^{3+}, Fe^{3+}, and Al^{3+}; anions - I^- ,Br^-, Cl^-, F^- , PO_4^{3-}, SO_4^{2-} , $Cr_2O_7^{2-}$ and S^{2-} and pesticides - chlorpyrifos, isoproturon, tebuconazole, metalasyl, dichlorovs and chlorpropham,100 μM).

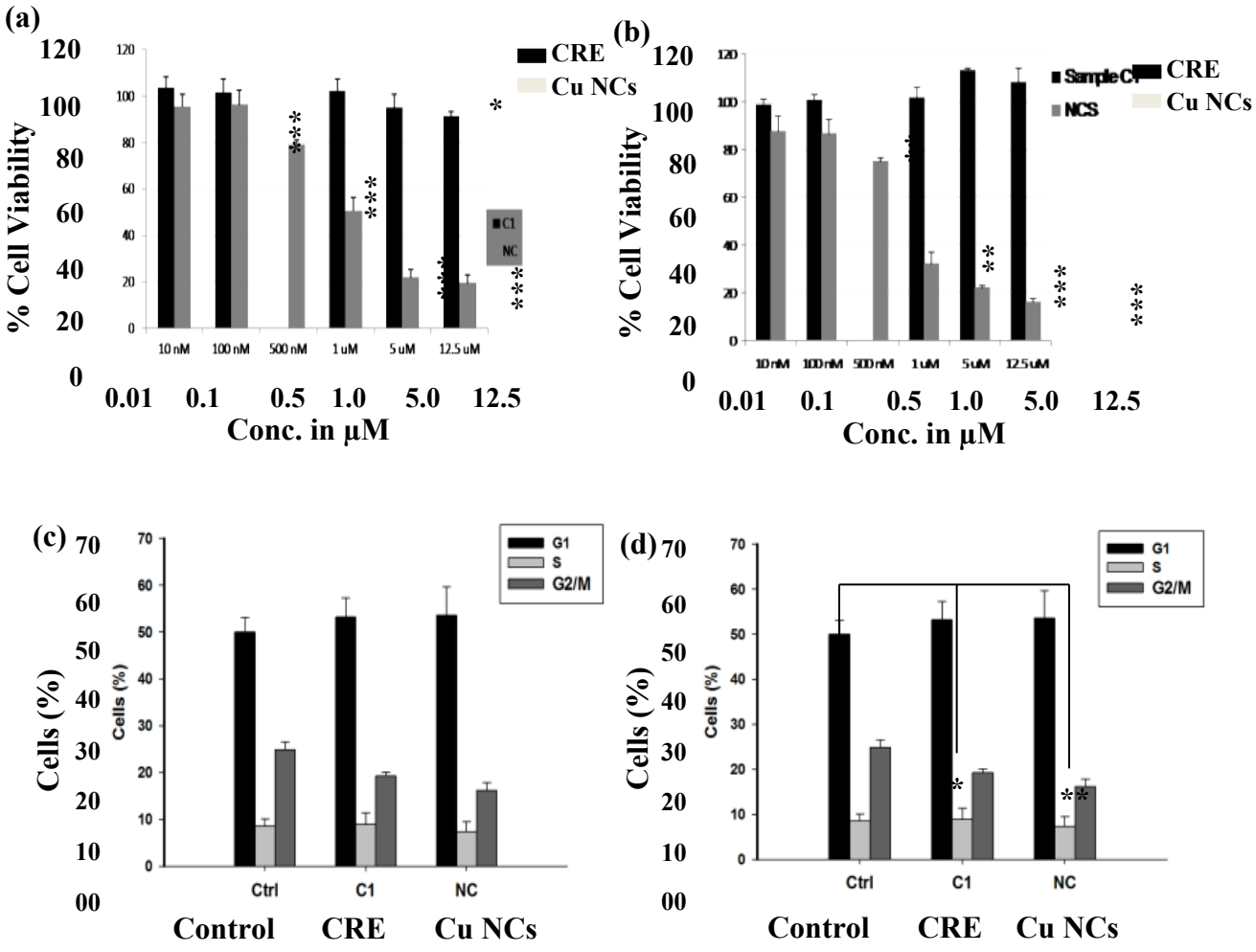

Figure S10. Effect of Cu NCs and CRE on cell viability in (a) RIN-5F and (b) MDAM231 cells respectively. Data are presented keeping the value in control cells as 100% viable. Data are mean ± SEM; n = 3-6. **, $P \leq 0.01$; ***, $P \leq 0.001$. Cell cycle Analysis of (c) RIN-5F and (d) MDAMB231 cells treated with CRE and Cu NCs when compared to that of control. Data are mean ± SEM; n = 3-6. *, $P \leq 0.05$; **, $P \leq 0.01$.