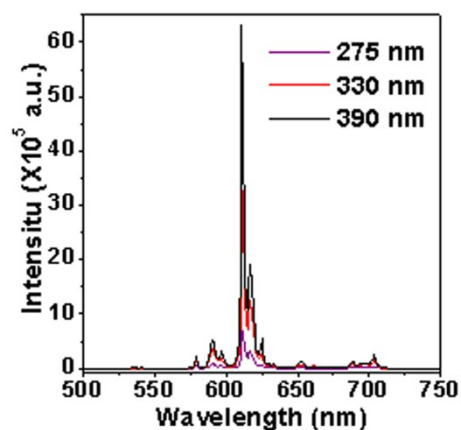
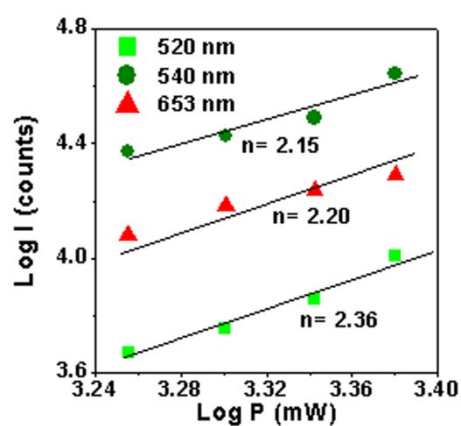


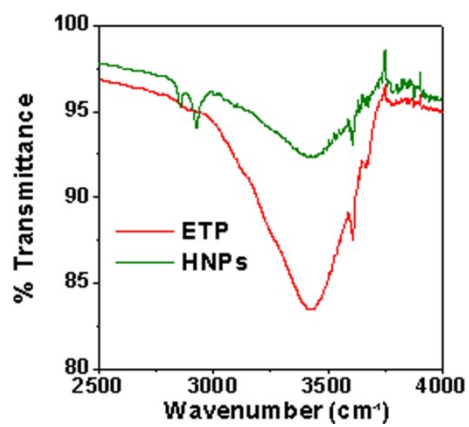
## Supporting Information



**Figure S1.** Downconversion emission spectra of HNPs under UV excitation (from 200 to 400 nm).



**Figure S2.**  $\ln I$  (intensity of UC emission) versus  $\ln P$  (applied laser input power in mW) plot for UC transitions. The slope of these curves ( $n$ ) gives the number of photons involved in the particular UC transition.



**Figure S3** FTIR spectra of ETP and HNPs showing the reduce intensity of vibrational bands in case of HNPs.