## Supporting Information



**Figure S1.** HRTEM images of Ag–TPDT NPs (A), CD–Ag–TPDT NPs (B) BDAC–Ag– TPDT NPs (C) and BDAC–CD–Ag–TPDT/AA NPs (D).



**Figure S2.** Calibration plot obtained from the difference in SPR band maximum ( $\Delta\lambda_{max}$ ) against concentration of Hg(II) ions for BDAC–CD–Ag–TPDT/AA NPs upon each addition of 5  $\mu$ M of Hg (II) ions.



**Figure S3.** EDX spectrum of BDAC–CD–Ag–TPDT/AA NPs after the addition of 55 μM Hg(II) ions.