Title: Effect of surface ligands on the optical activity of mercury sulfide nanoparticles

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Supplemental Figures

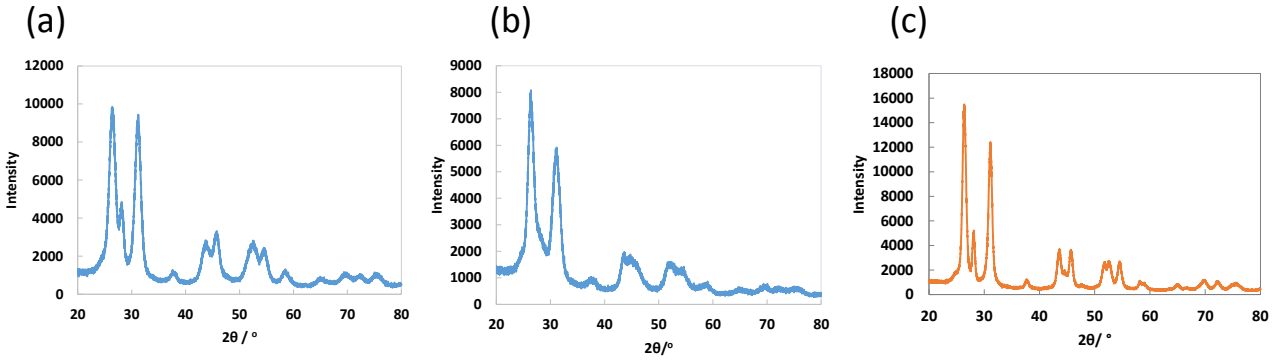
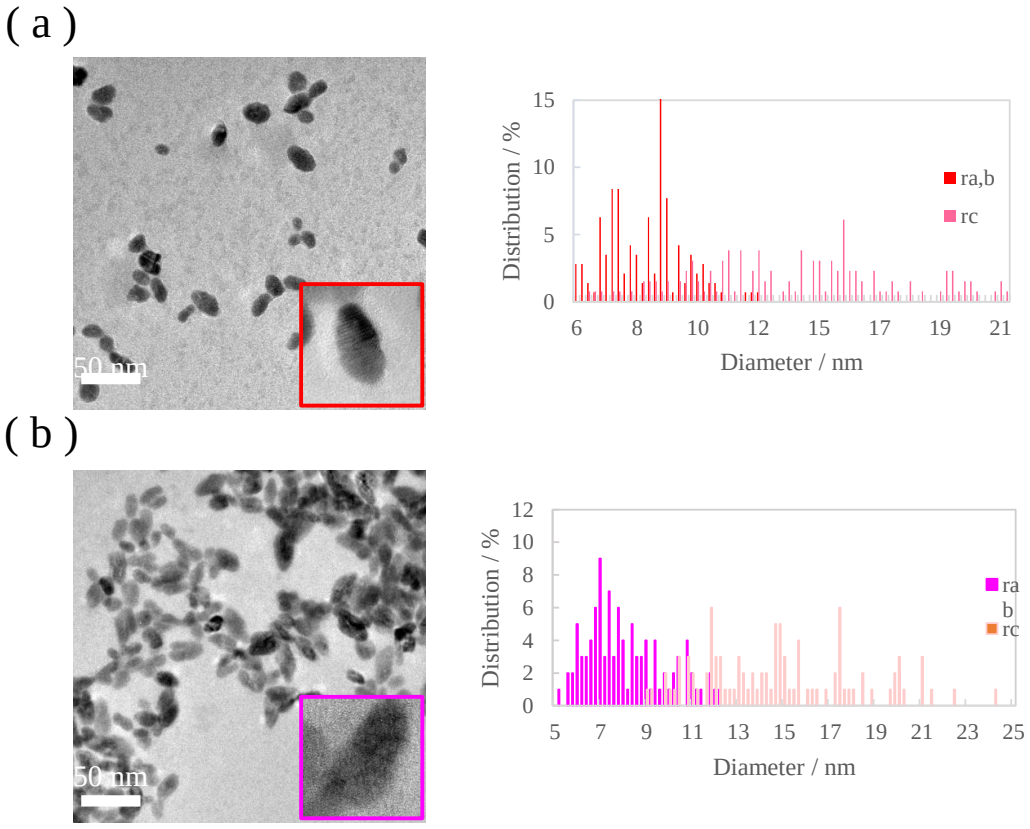


Fig. S1 XRD profiles of HgS NPs capped with chiral ligands: (a) D-Pen, (b) D-Cys and (c) L-NAc-Cys and (f) DT ligand-exchanged from D-Pen, together with their size distributions. "rab" and "rc" denote the lengths along with the short and long axes of prolate-spherical shaped NPs, respectively.



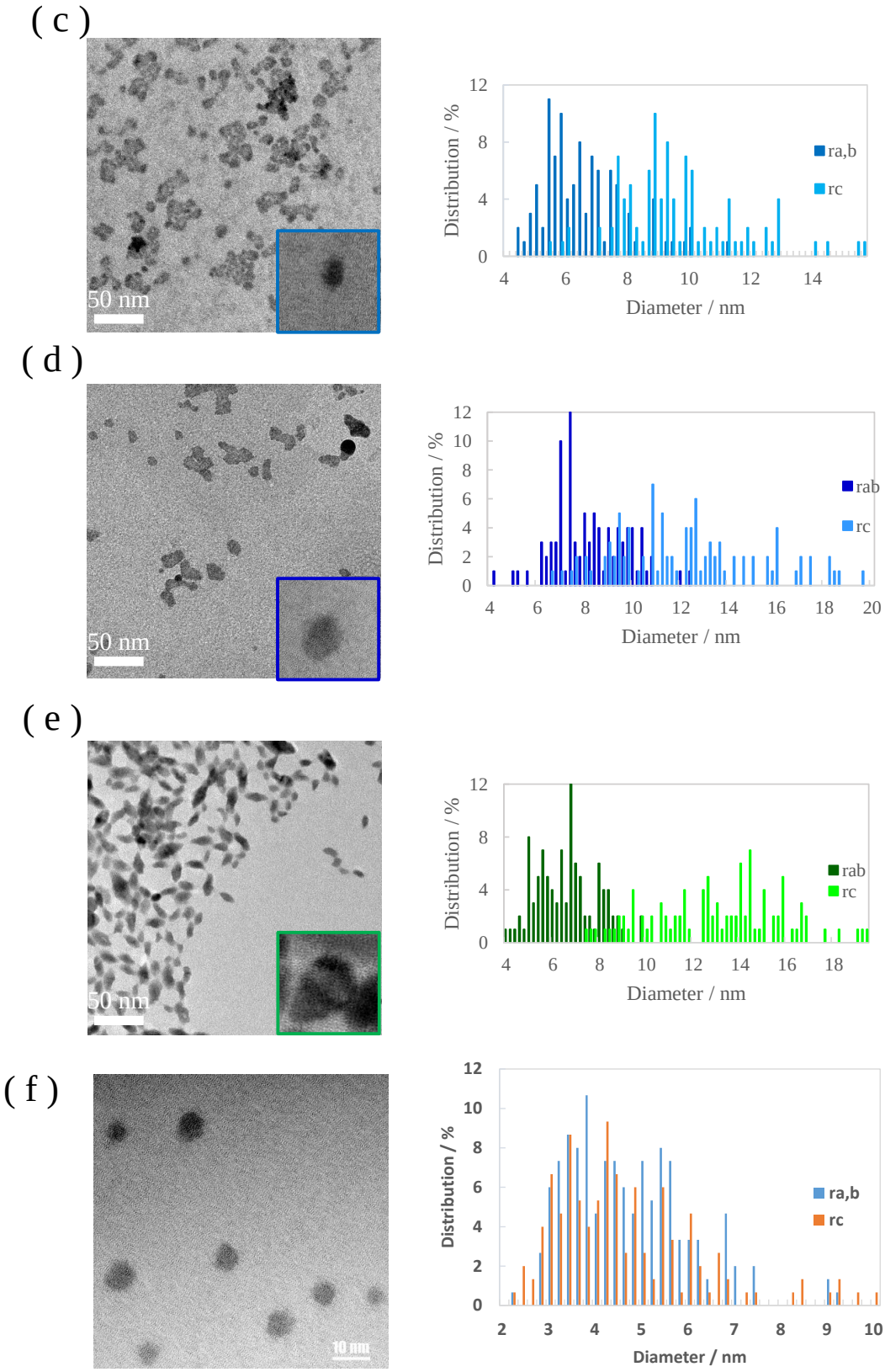


Fig. S2 TEM images of HgS NPs capped with chiral ligands: (a) D-Pen, (b) L-Pen, (c) D-Cys, (d) L-Cys, (e) L-NAc-Cys and (f) DT ligand-exchanged from D-Pen, together with their size distributions. "rab" and "rc" denote the lengths along with the short and long axes of prolate-spherical shaped NPs, respectively.

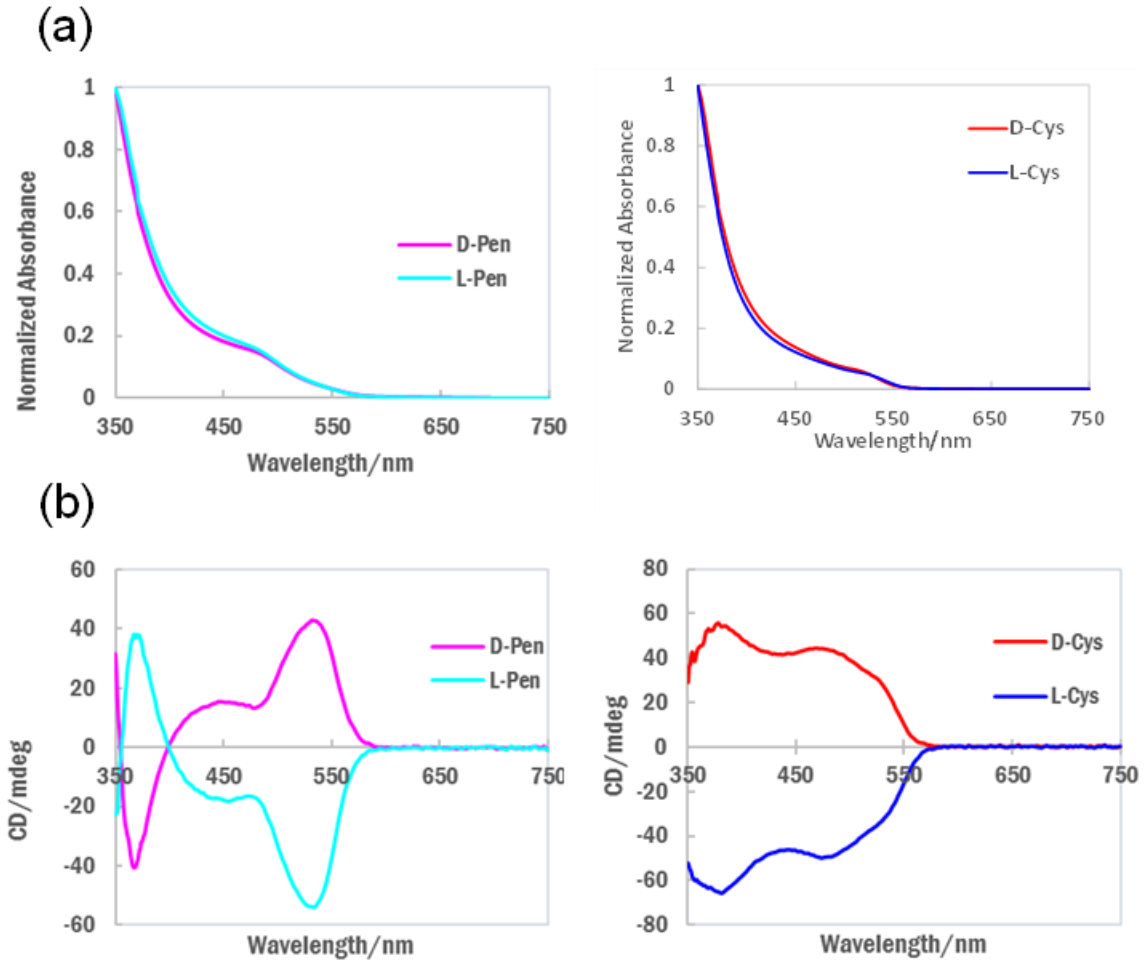


Fig. S3 (a) Absorption and (b) CD spectra of HgS NPs capped with Pen and Cys.

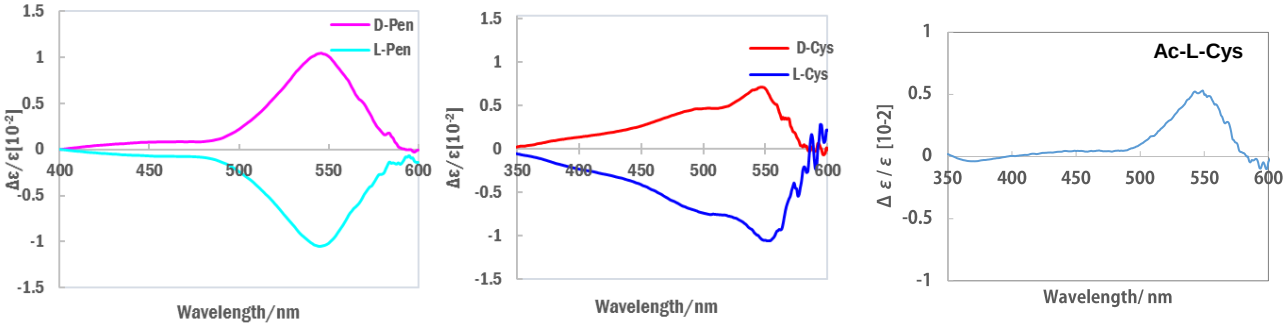


Fig. S4 g_{abs}-spectra of HgS NPs capped with Pen, Cys and Ac-L-Cys.

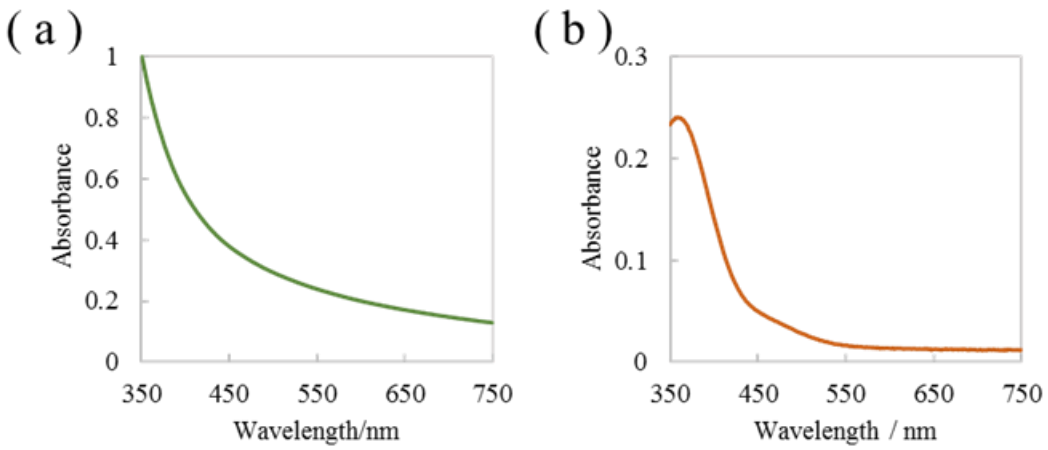


Fig. S5 Absorption spectra of HgS NPs prepared in the presence of (a) MPA and (b) AET.

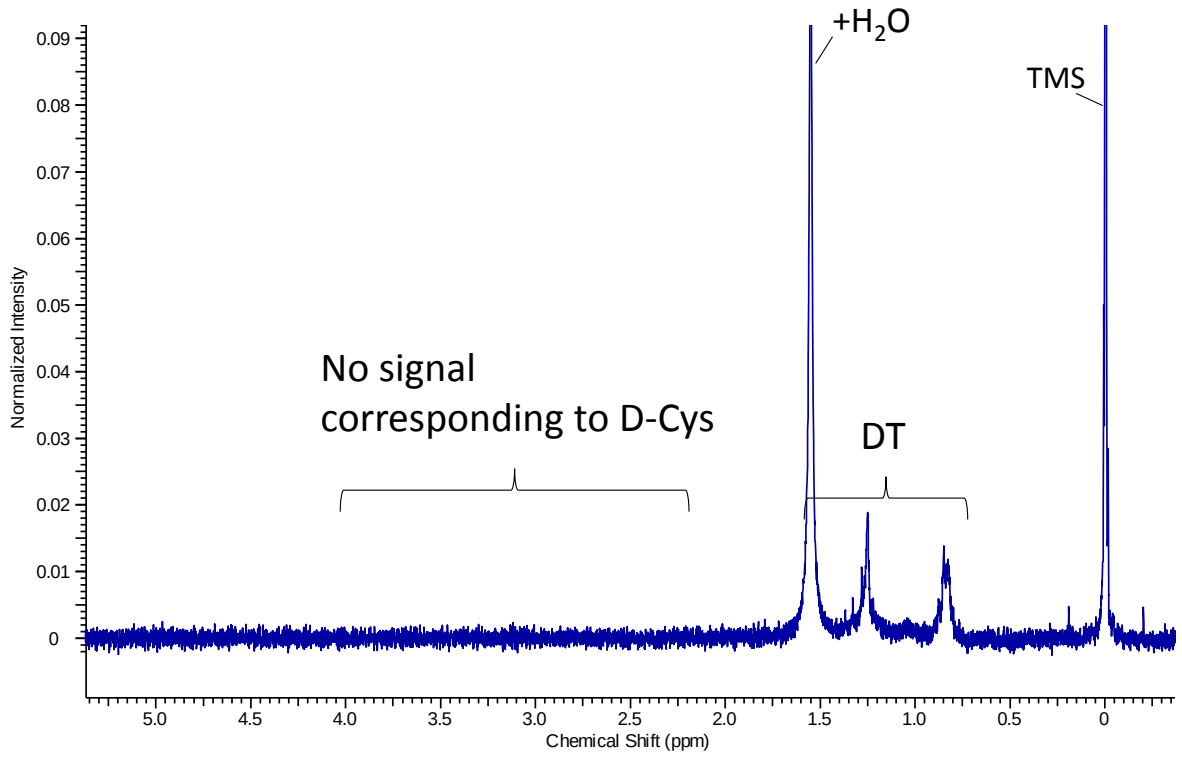


Fig. S6 ^{1}H NMR spectrum after the ligand exchange from L-Cys to DT (in $CDCl_3$/TMS).

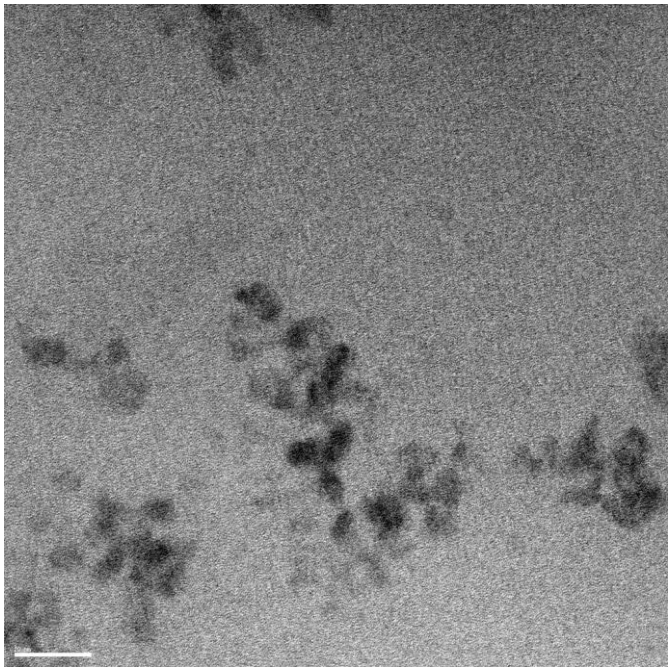


Fig. S7 Typical TEM image of HgS NPs capped with DT after ligand exchanged from L-Cys (Scale bar: 20 nm).

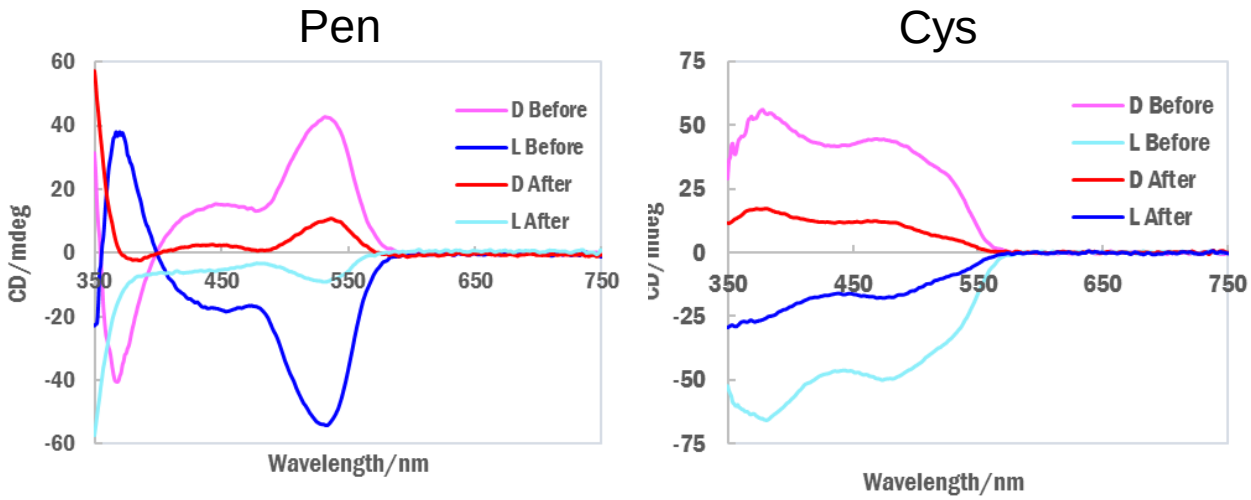


Fig. S8 Comparison of CD spectra before and after the ligand-exchange.

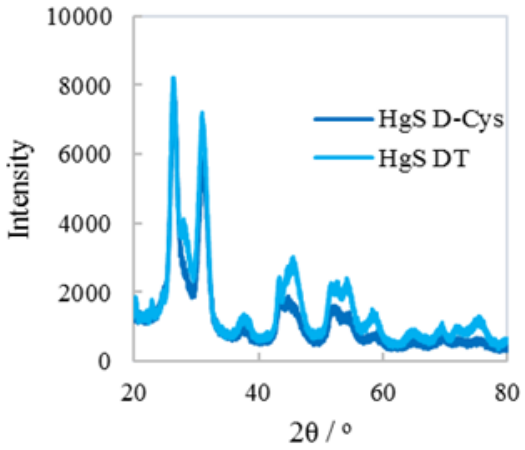


Fig. S9 XRD profiles of HgS NPs before and after the ligand-exchange from D-Cys to DT.

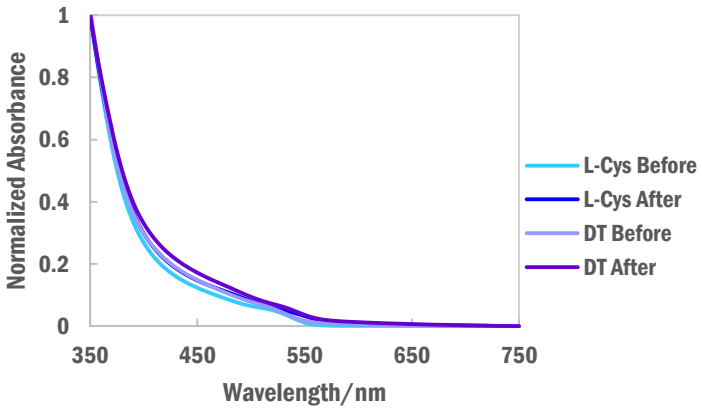


Fig. S10 Absorption spectral change of the aqueous solution of HgS@L-Cys and TCE solution of HgS@DT before and after the heat treatment at 80 ºC in water and 100 ºC in TCE.