A highly sensitive and selective detection of Hg (II) in 100% aqueous solution by fluorescent labeled dimerized Cys residues

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Supplementary Information

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Figure S1: Characterization UV data of absorbance for 10 μM Mcys in 10 mM HEPES buffer pH 7.4



Figure S2: Characterization UV data of absorbance for 10 μM Dcys in 10 mM HEPES buffer pH 7.4



Figure S3: Characterizations data of HPLC Chromatogram of Mcys



Figure S4: Characterizations data of HPLC Chromatogram of Dcys



Figure S5: Characterization data of ESI-mass of **Mcys** Calculated mass = $353.09 (M+H^+)$ and measured mass = $354.1(M+H^+)$; $376.1 (M+Na^+)$



Figure S6: Characterization data of ESI mass of **Dcys** (calculated mass = $704.16 (M+H^+)$ and observed mass = $705.11 (M+H^+)$.



Figure S7: Characterization data ¹H NMR spectra for Mcys in DMSO-d6



Figure S8: Characterization data ¹³C NMR spectra for Mcys in DMSO-d6



Figure S9: Characterization data ¹H NMR spectra for **Dcys** in DMSO-d6



Figure S10: Characterization data ¹³C NMR spectra for **Dcys** in DMSO-d6



Figure S11: Emission spectra of **Dcys** (5µM) at different pH.