A Zn^{2+} specific triazole based calix[4]arene conjugate (L) as fluorescence sensor for histidine and cysteine in HEPES buffer milieu

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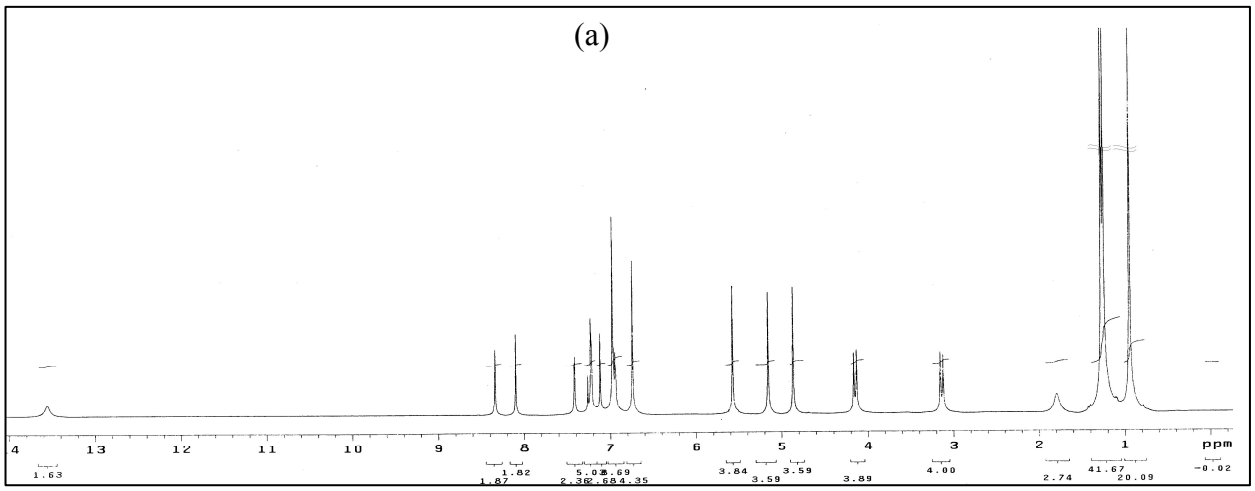
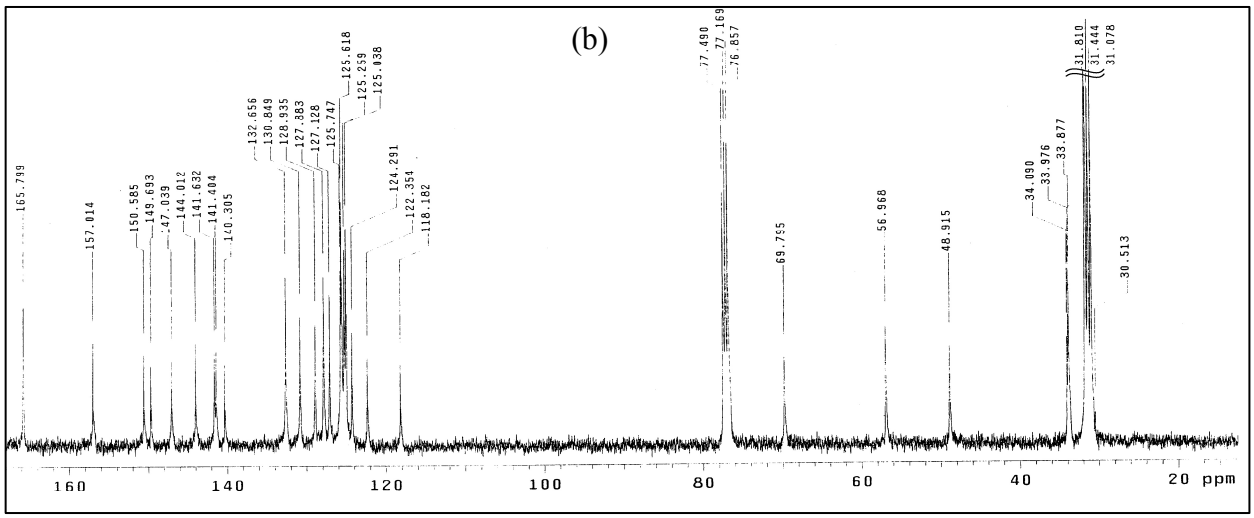




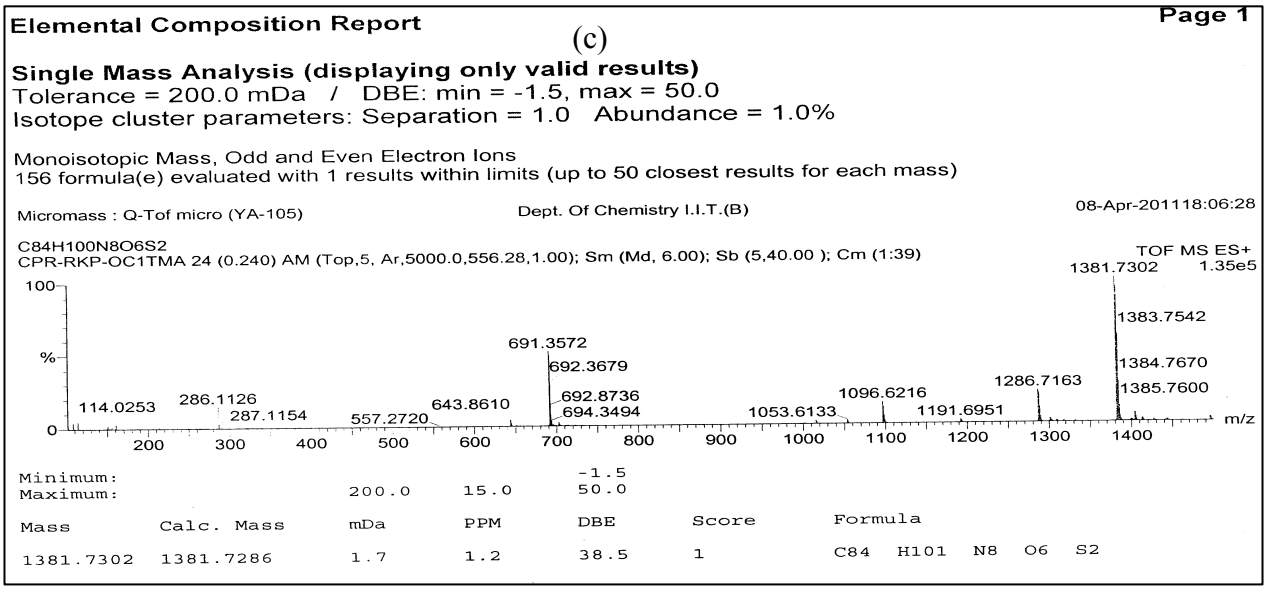
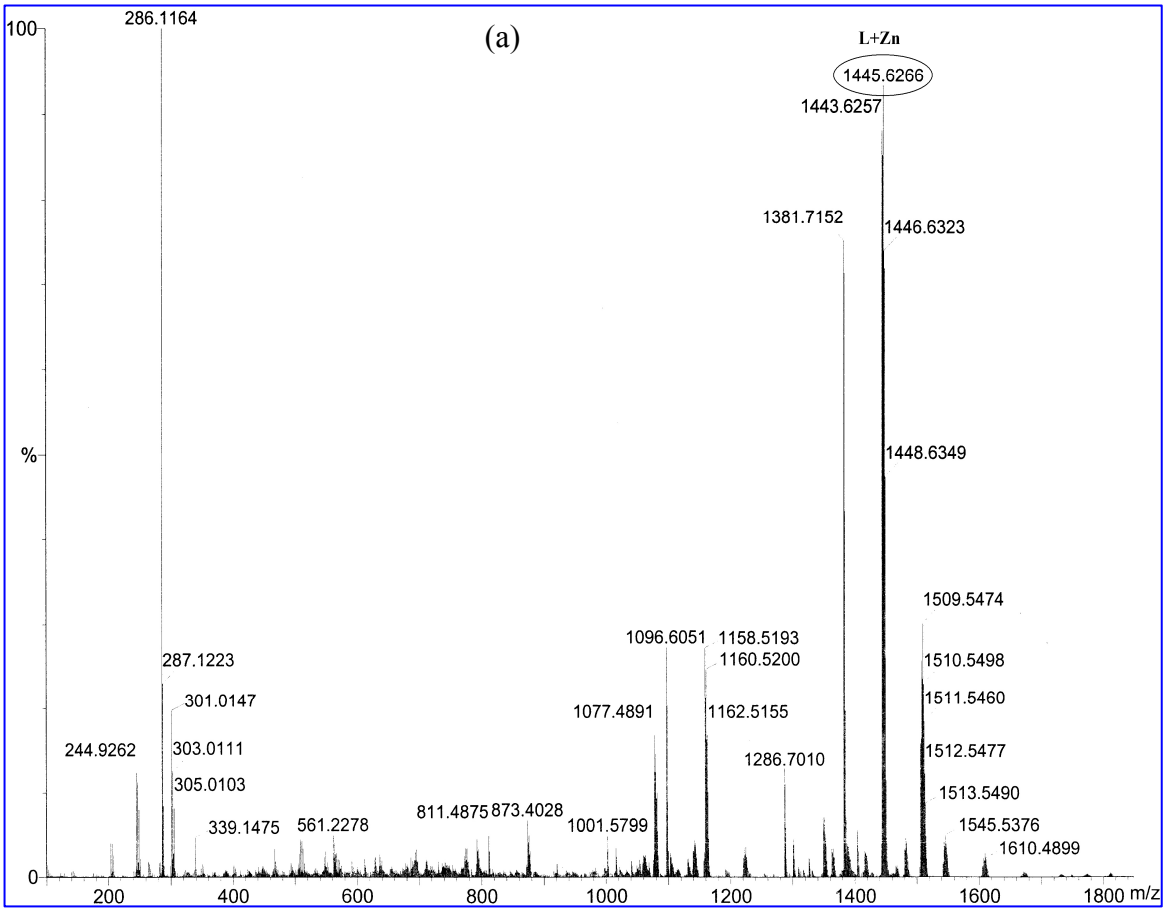


Figure S1: Spectra for **L**: (a) ^{1}H NMR; (b) ^{13}C NMR; (c) HRMS.



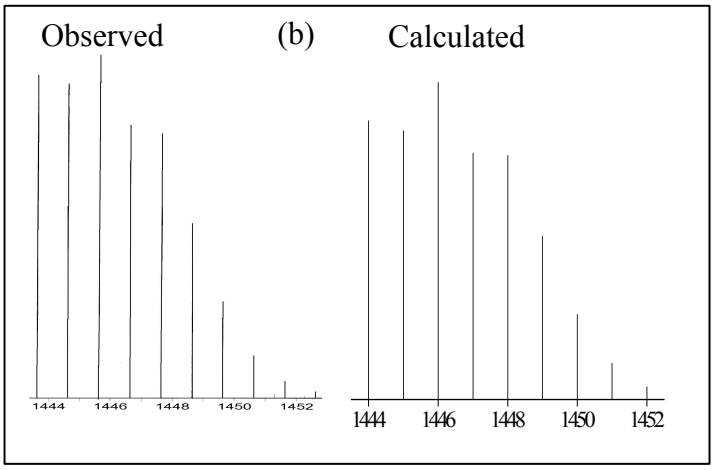


Figure S2. (a) ESI MS spectrum of the *in situ* prepared [Zn**L**] complex; (b) the isotopic peak pattern (observed & calculated) supports the presence of Zn^{2+}.

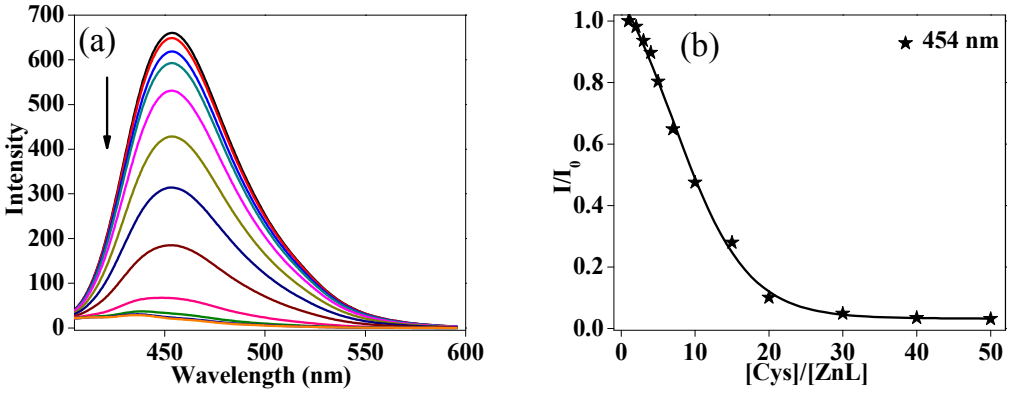


Figure S3: Fluorescence spectra obtained for the titration of the [Zn**L**] with Cys in ethanolic HEPES buffer solution (2:1) at pH = 7.4, λ_{ex} = 390 nm. [Zn**L**] = 10 μM.

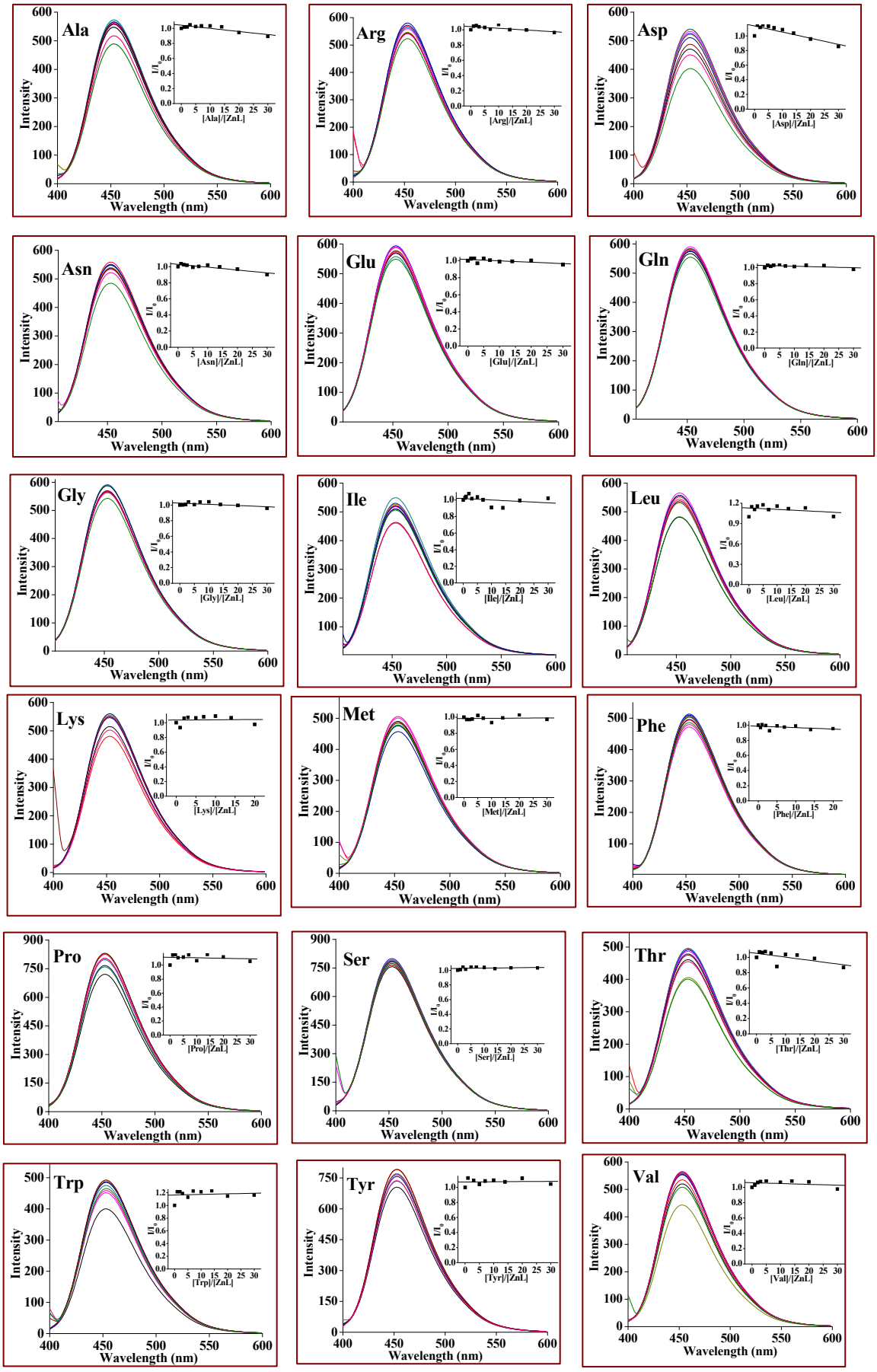


Figure S4: Fluorescence spectra obtained for the titration of [Zn**L**] with different amino acids in ethanolic HEPES buffer solution (2:1) at pH = 7.4, λ_{ex} = 390 nm. [Zn**L**] = 10 μM.

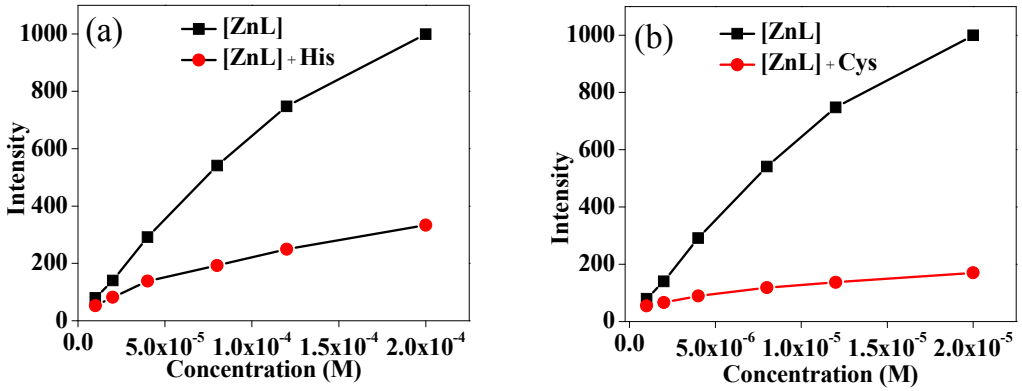


Figure S5: Fluorescence spectra obtained upon titration of [Zn**L**] with His and Cys in ethanolic HEPES buffer solution (2:1) at pH = 7.4, λ_{ex} = 390 nm. [Zn**L**] = 10 μM.

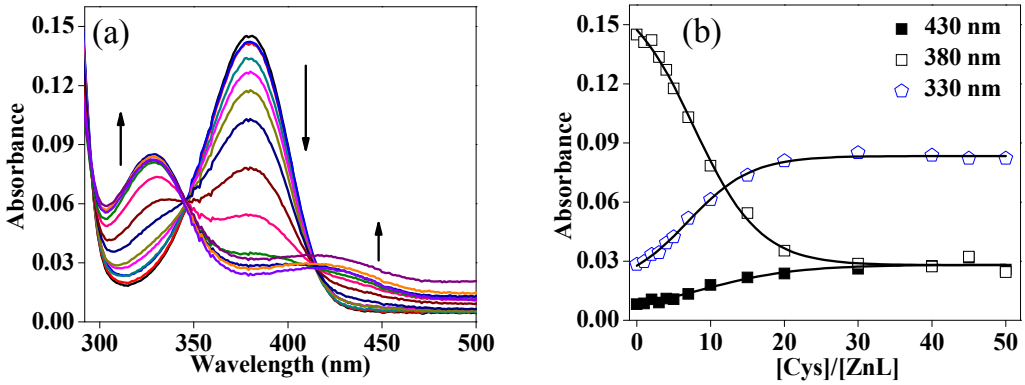


Figure S6. (a) Absorption spectra obtained during the titration [Zn**L**] with Cys in ethanolic HEPES buffer solution (2:1) at pH = 7.4, [Zn**L**] = 10 μM; (b) plot of absorbance *vs*. [Cys]/ [Zn**L**] for different absorption bands.

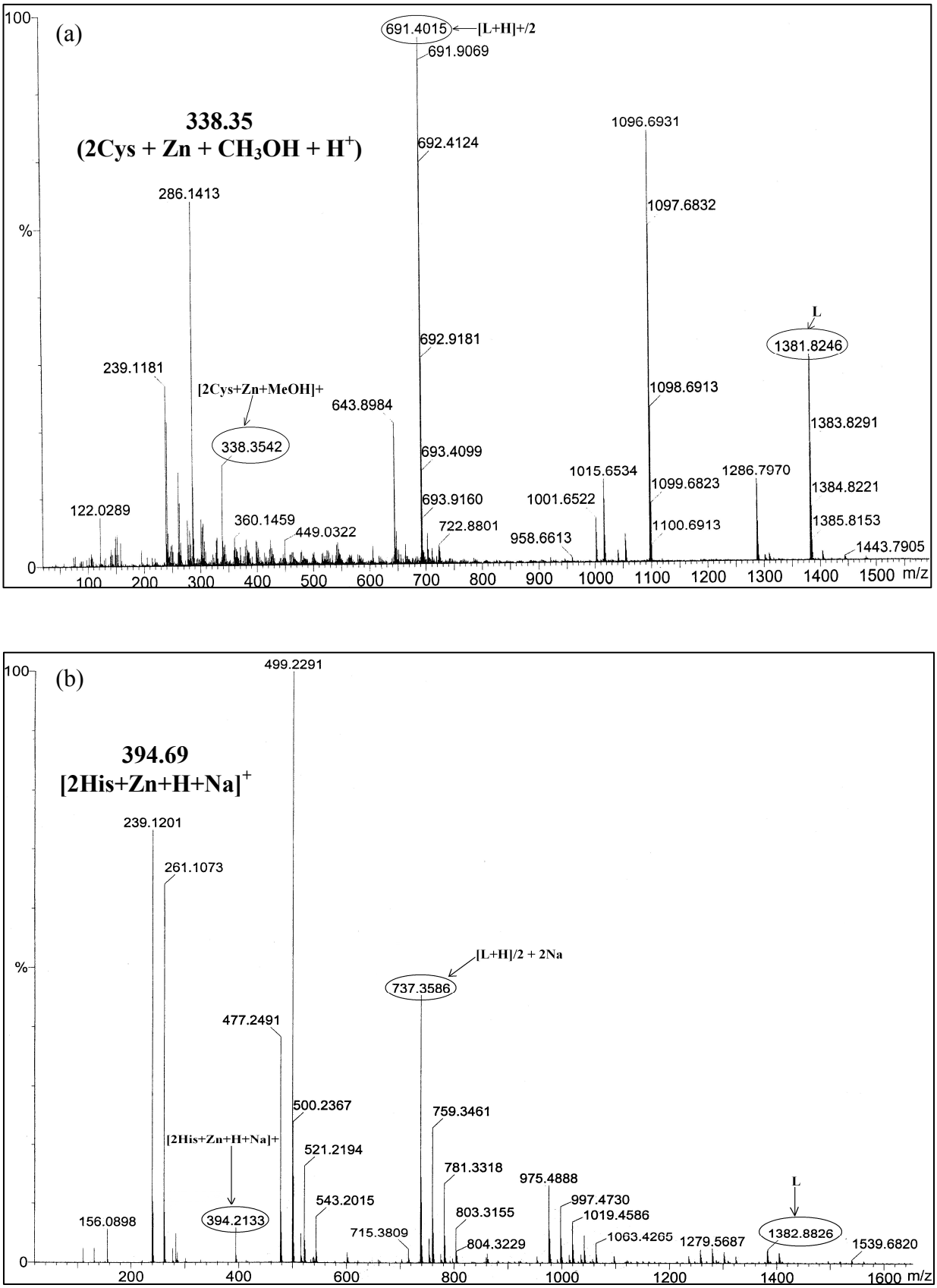


Figure S7: ESI MS spectra obtained during the titration of [Zn**L**] with (a) Cys and (b) His; and proposed species based on ESI Mass.

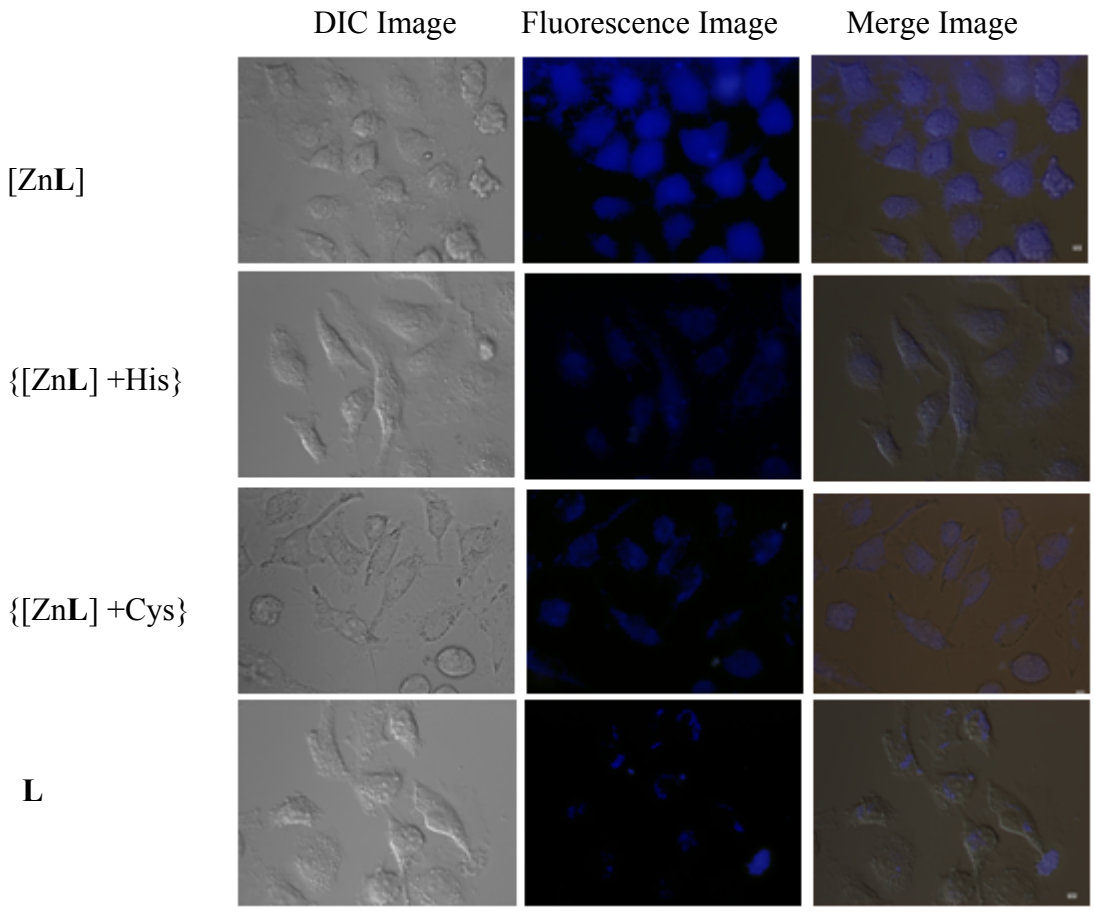


Figure S8. Fluorescence microscopy images of HeLa cells incubated with **L** and [Zn**L**] followed by His and Cys treatment (λ_{ex} at ~358 nm and λ_{em} at ~ 461 nm) in PBS buffer