Supporting information for:

Zinc-mediated diastereoselective assembly of a trinuclear circular helicate

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1. *Characterization of the triptycene-based ligand H_2L*

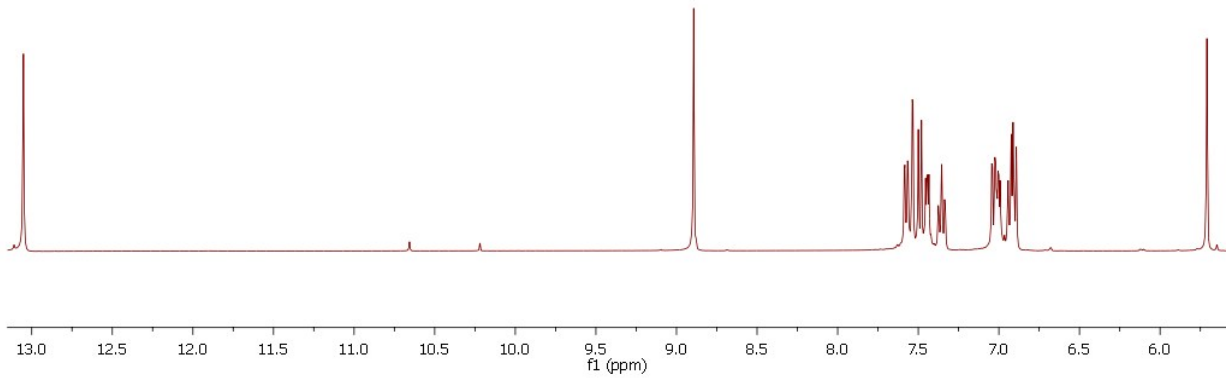

Fig. S1. ^{1}H NMR spectrum of H_2L in dmso-d_6

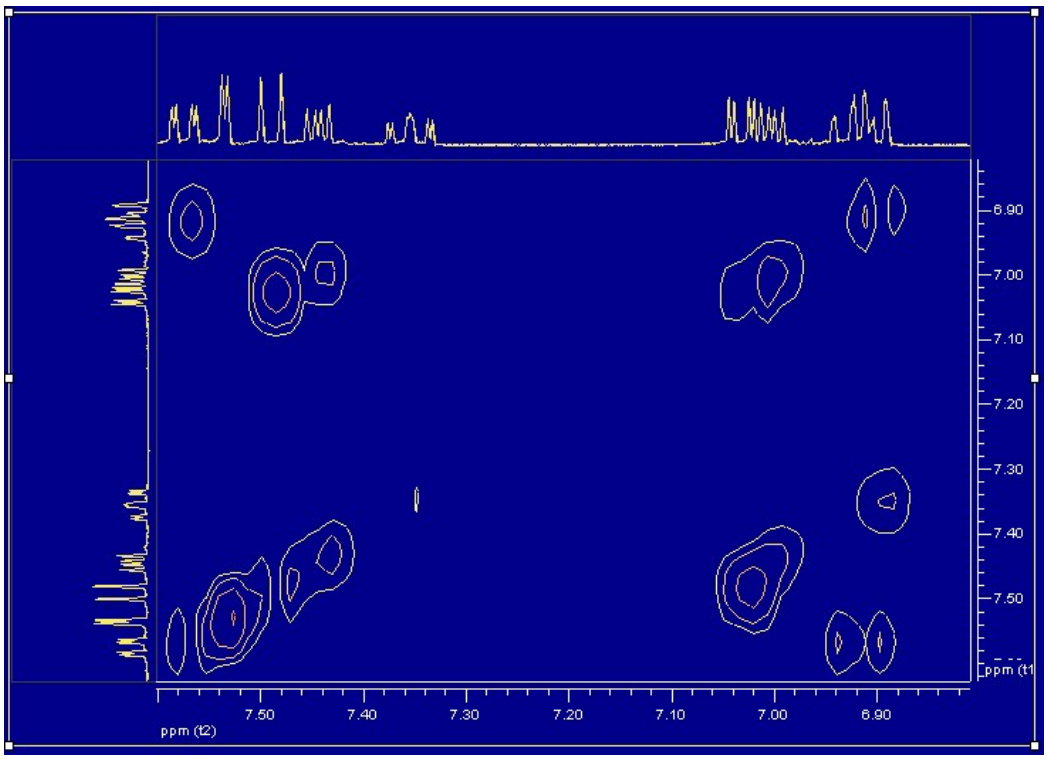

Fig. S2. Partial view (aromatic region) of the COSY spectrum (H-H correlation) of H_2L in dmso-d_6

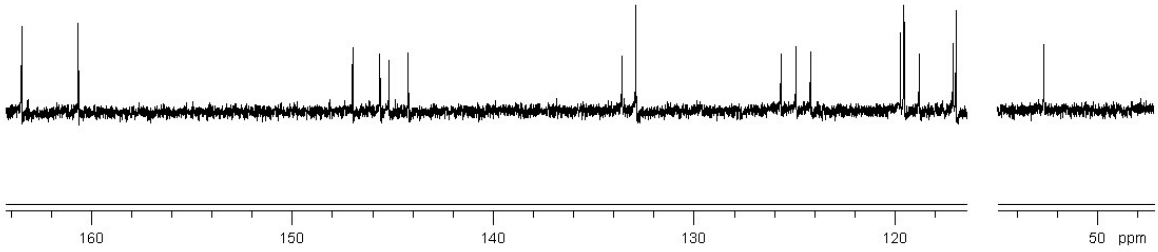

Fig. S3. ^{13}C NMR spectrum of H_2L in dmso-d_6

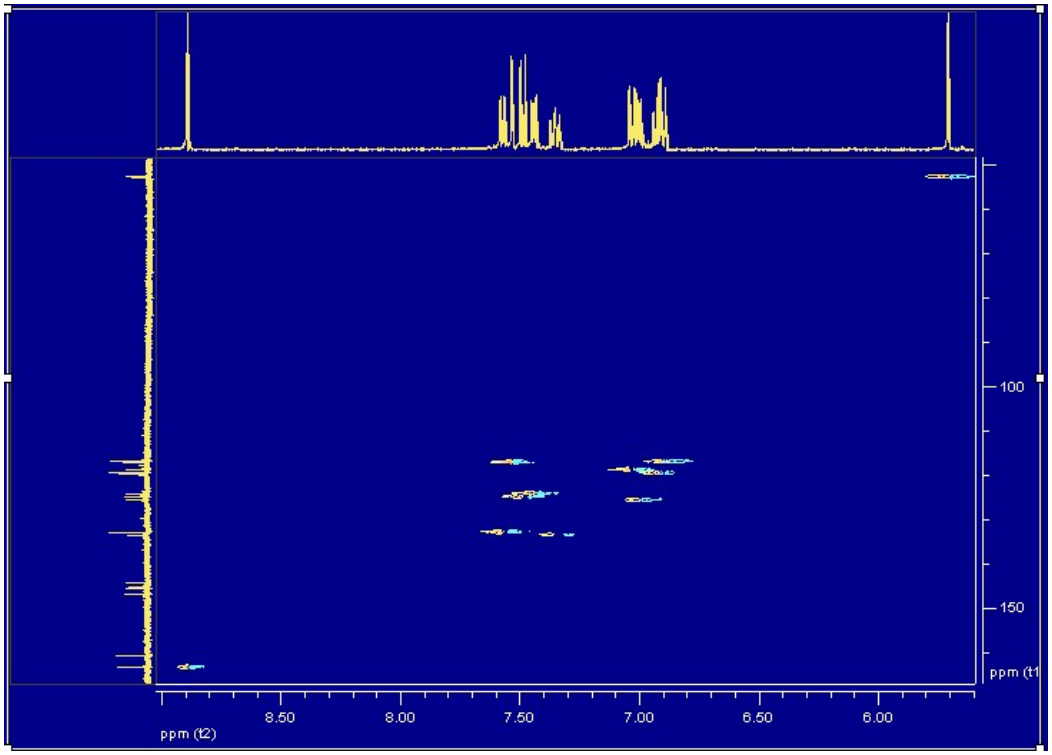

Fig. S4. HMQC spectrum (C-H correlation) of H_2L in dmso-d_6

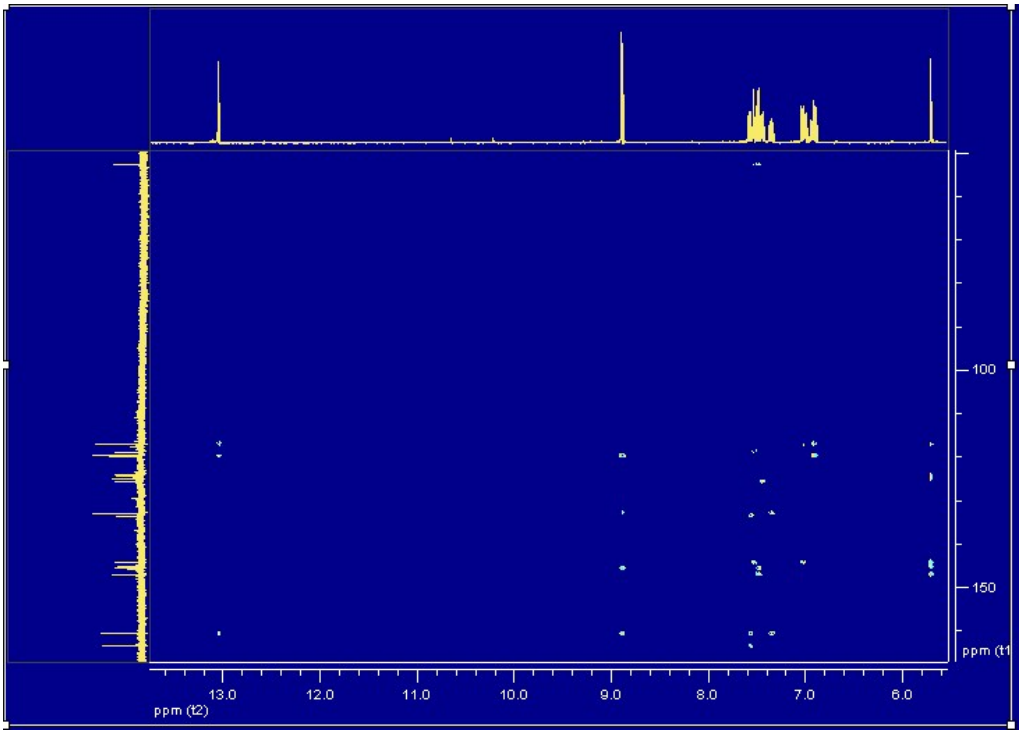

Fig. S5. HMBC spectrum (C-H correlation) of H_2L in dmso-d_6

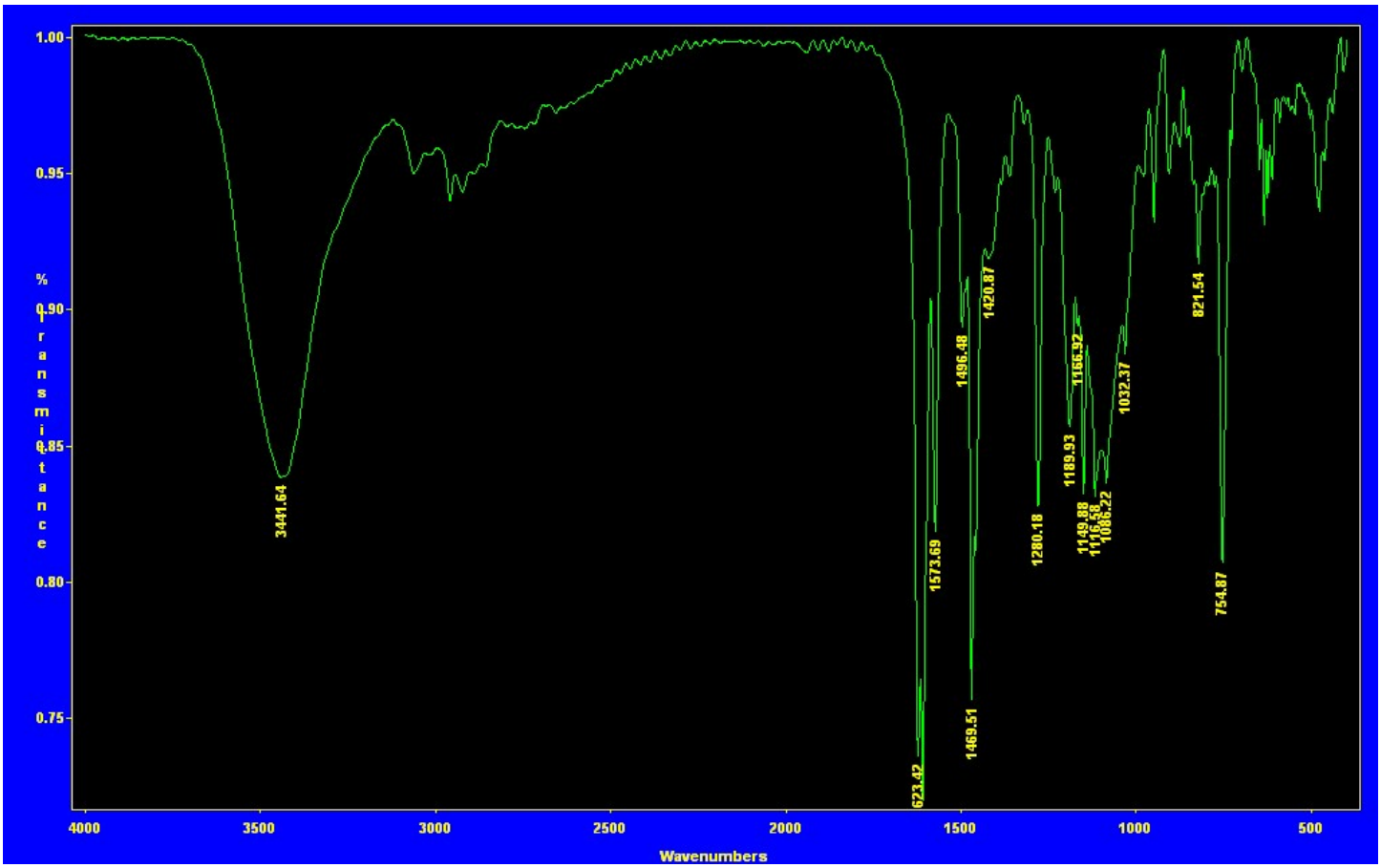

Fig. S6. IR spectrum of H_2L

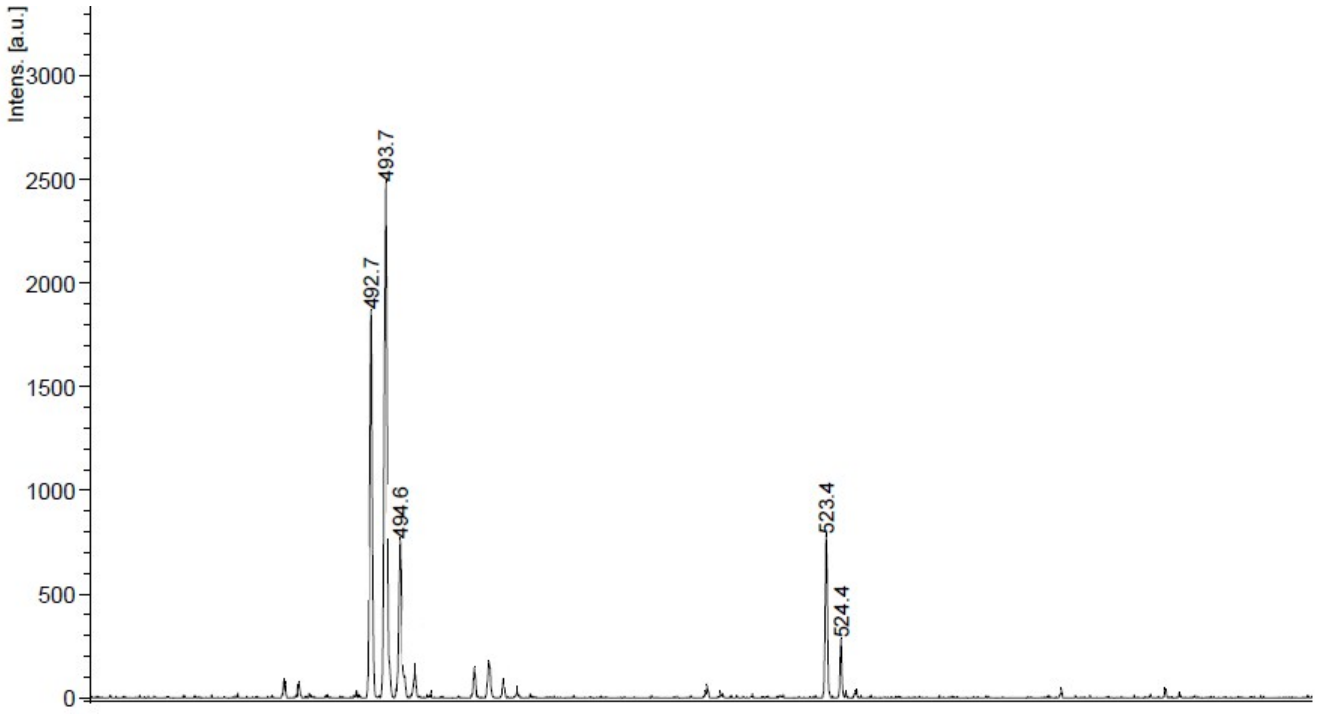

Fig. S7. Mass spectrum (MALDI-TOF) of H_2L

2 Characterization of $Zn_3L_3{\cdot}8H_2O$

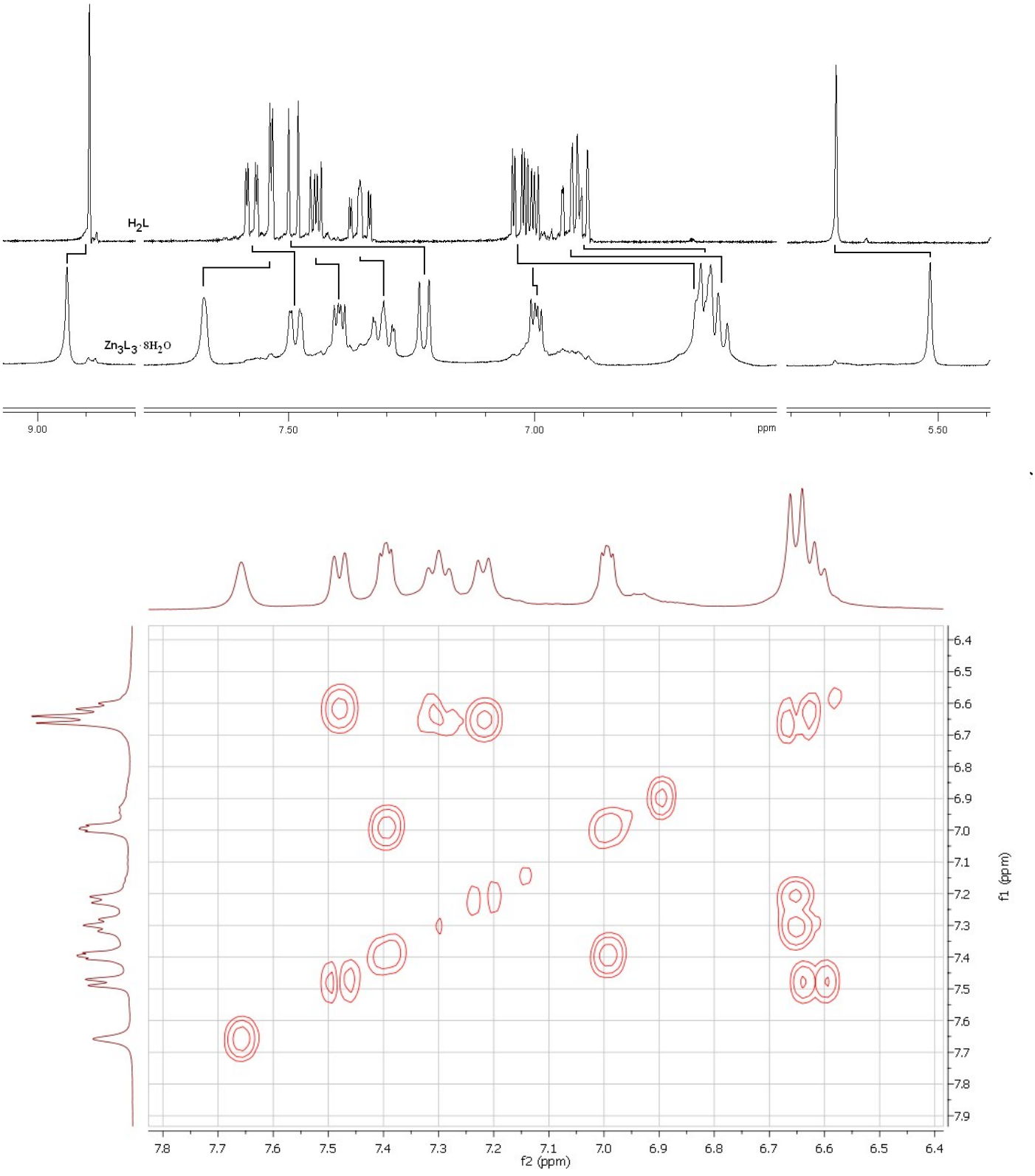

Fig. S9. Partial view (aromatic region) of the COSY spectrum of $Zn_3L_3{\cdot}8H_2O$ in dmso-d_6

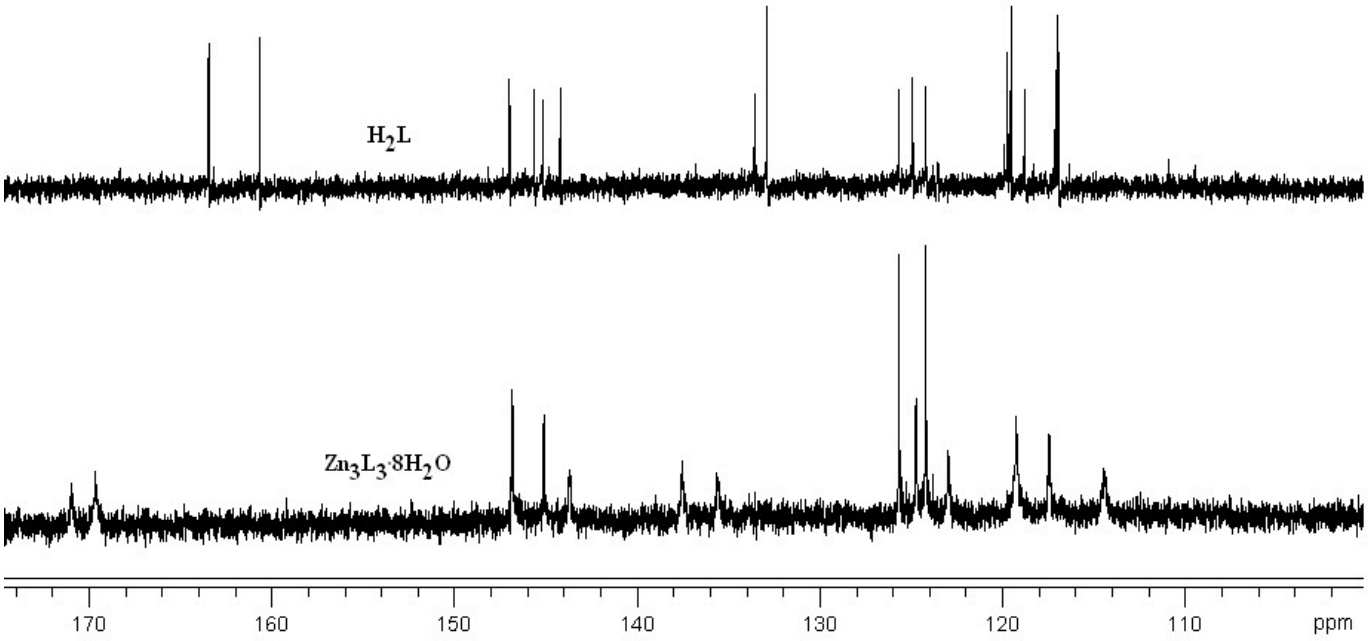

Fig. S10. Superposition of ^{13}C NMR spectra of $Zn_3L_3 \cdot 8H_2O$ and H_2L in dmso-d_6 showing the influence of complexation in chemical shifts of the proton signals.

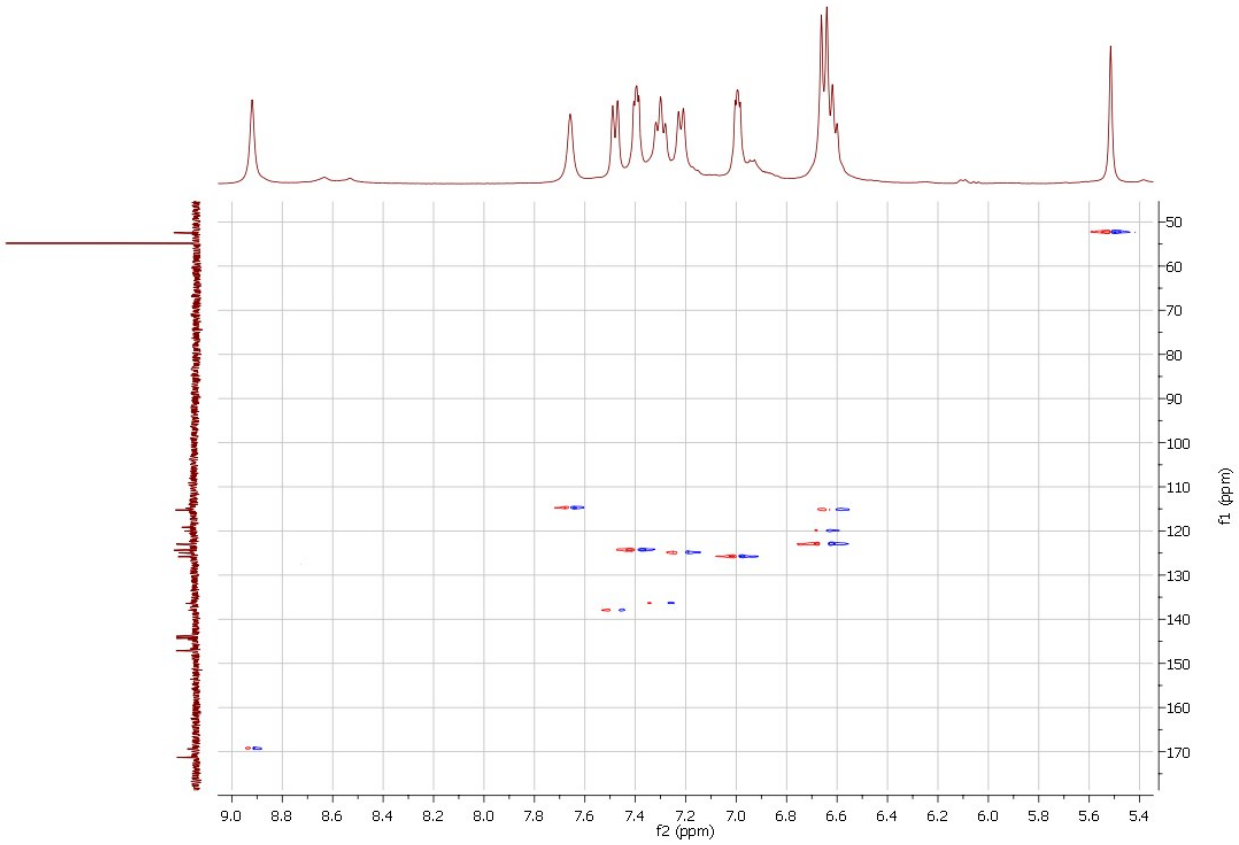

Fig. S11. HMQC spectrum of $Zn_3L_3 \cdot 8H_2O$ in dmso-d_6

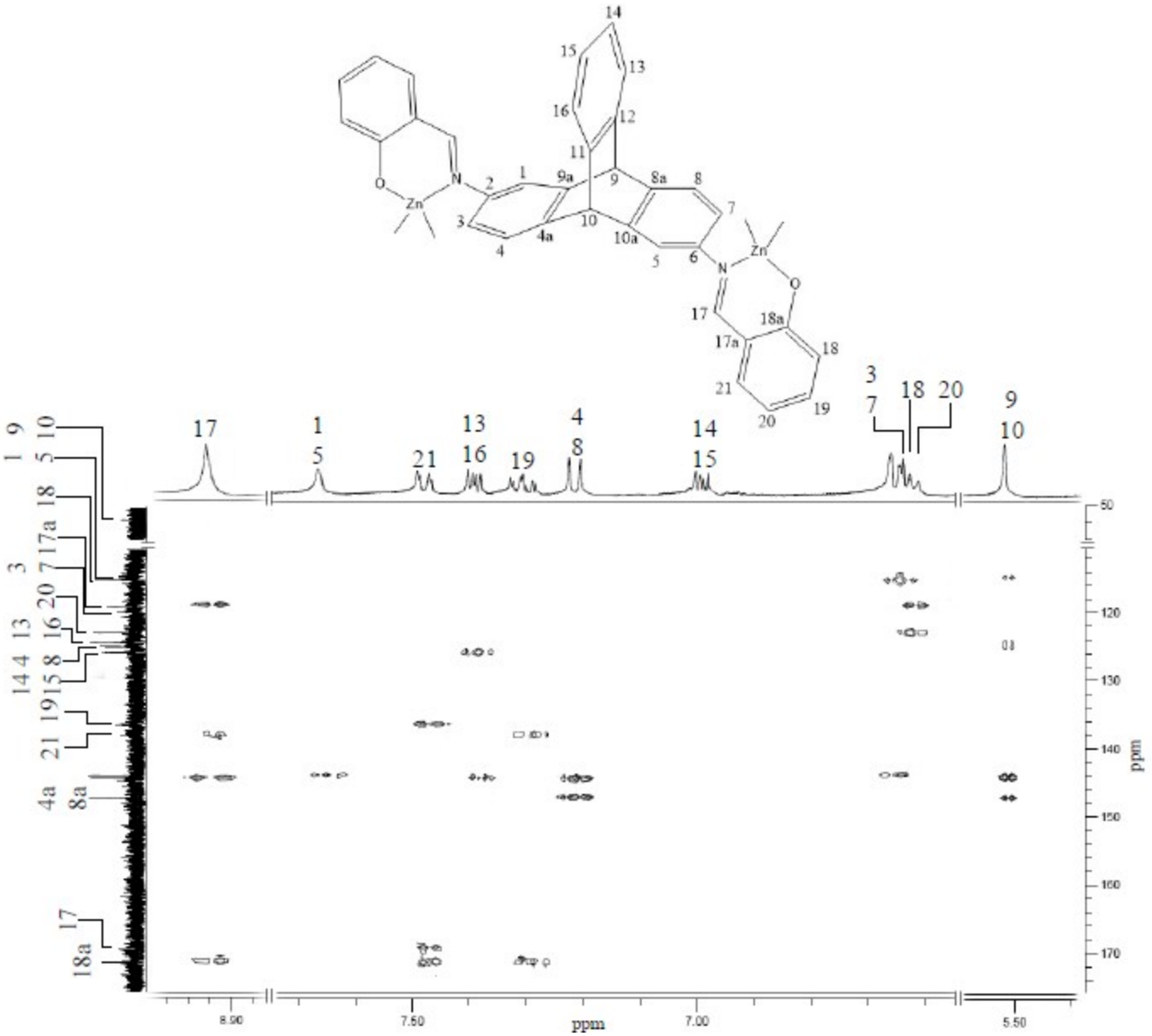

Fig. S12. HMBC spectrum of $Zn_3L_3 \cdot 8H_2O$ in dmso-d_6

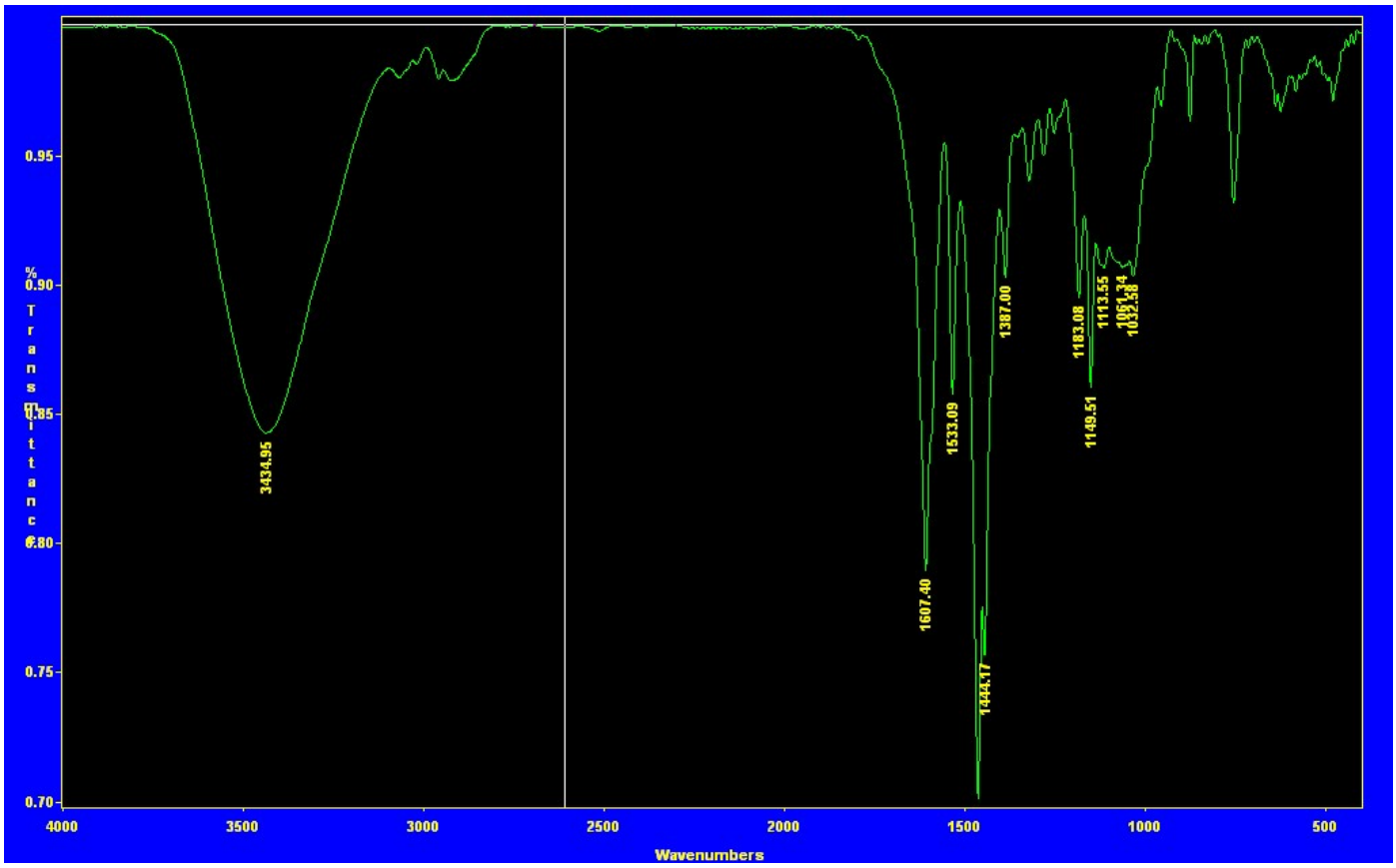

Fig. S13. IR spectrum of $Zn_3L_3 \cdot 8H_2O$

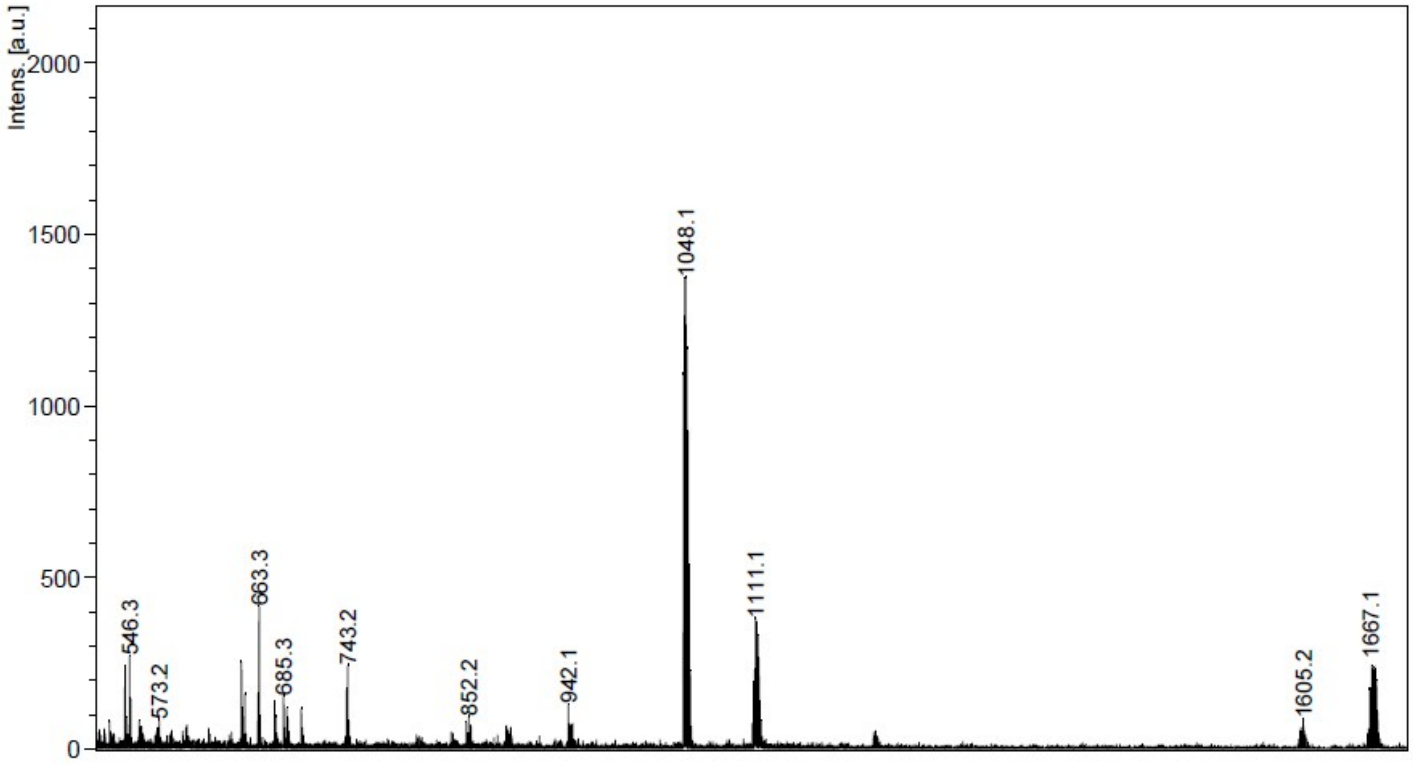

Fig. S14. Partial view of the mass spectrum of $Zn_3L_3 \cdot 8H_2O$

3. Optical studies on the compounds

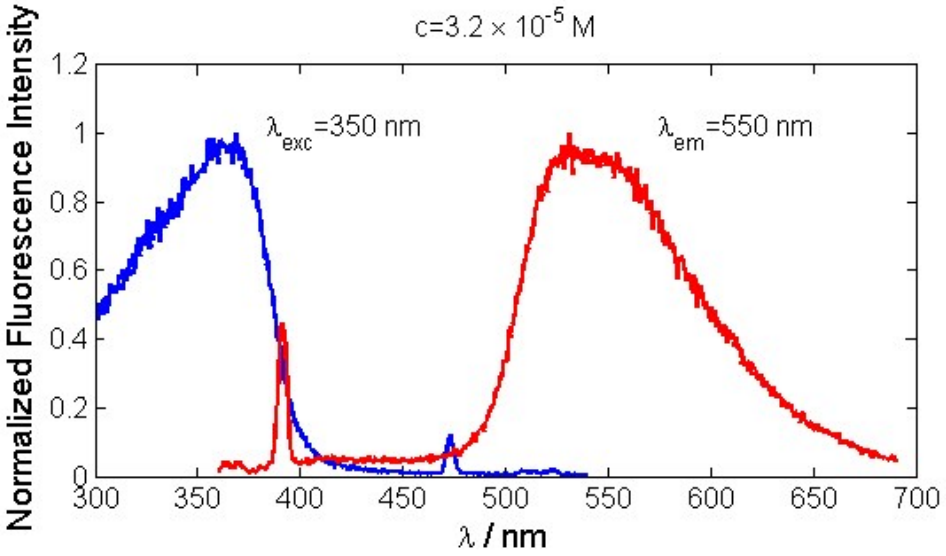

Fig. S15. Excitation (blue line) and emission (red line) spectra of H_2L (in THF, 3.2 x 10^{-5} M).

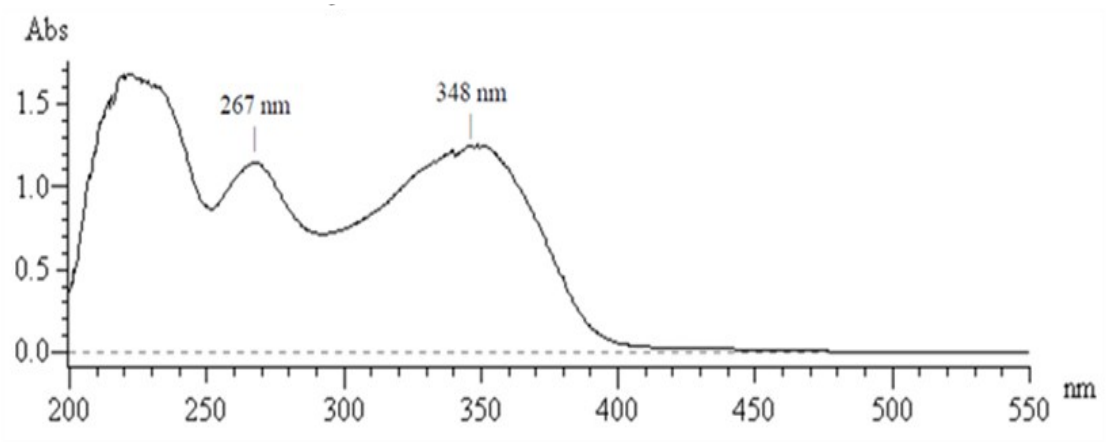

Fig. S16. UV-Vis absorption spectrum of H_2L/tetramethylammonium hydroxide in acetonitrile/methanol

Table S1. Instrumental parameters of the UV-Vis absorption measurements

Data mode	Abs	**Delay**	0 sec
Start Wavelength	550 nm	**Path Length**	10.0 nm
End Wavelength	200 nm	**Response**	Fast
Scan speed	800 nm/min	**Light Source**	WI/D_2
Baseline correction	System	**Lamp Change**	340 nm

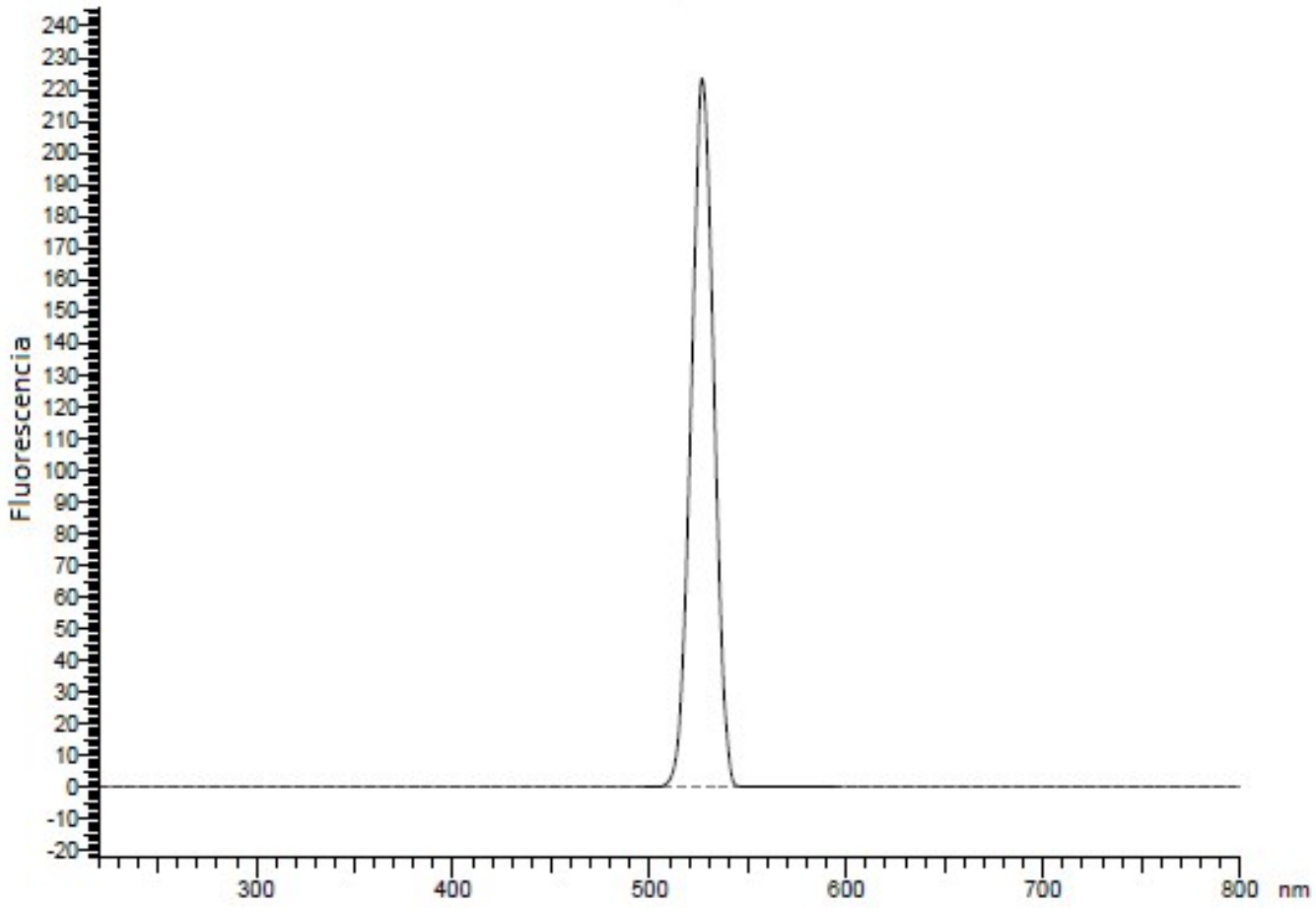

Fig. S17. Fluorescence emission spectrum of H_2L/tetramethylammonium hydroxide in acetonitrile/methanol

Table S2. Instrumental parameters of the fluorescence emission measurements.

Measurement Type	Wavelength scan	**Scan speed**	1500 nm/min
Scan mode	Emission	**Delay**	0 sec
Data mode	Fluorescence	**EX Slit/ EM Slit**	10.0 nm/10.0 nm
EX WL	350.0 nm	**PMT Voltage**	400 V
EM Start WL	220.0 nm	**Response**	0.08 sec
EM End WL	800.0 nm	**Corrected spectra**	Off

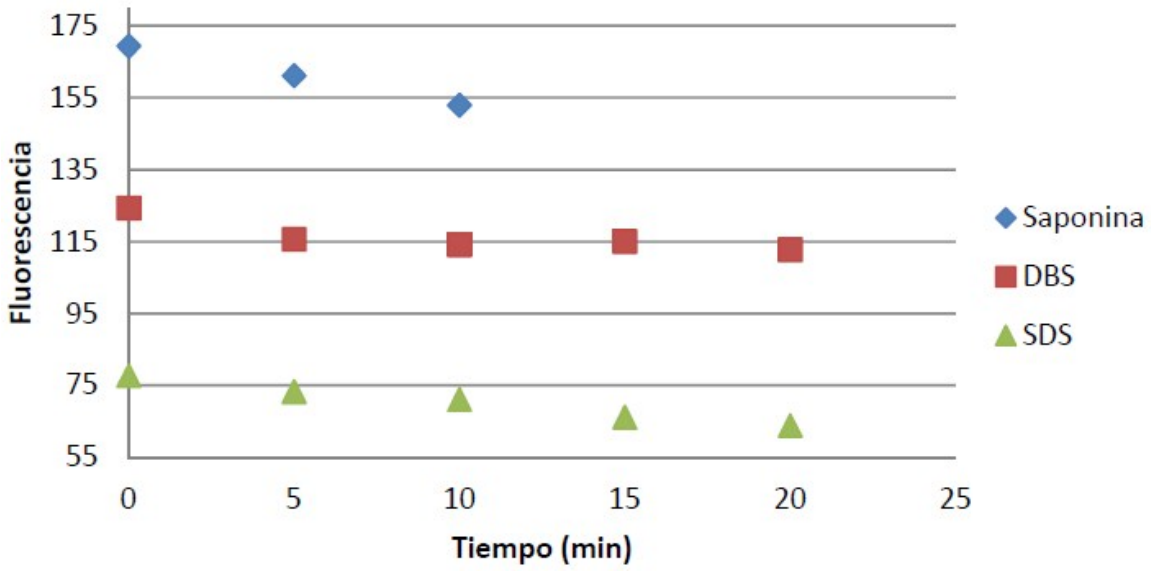

Fig. S18. Variation of the fluorescence emission spectrum with time for λ = 525 nm at λ_{exc} = 350 nm of H_2L/tetramethylammonium hydroxide in the presence of 50 μL of Saponine, sodium dodecylbenzenesulfonate (SDBS) and sodium dodecylsulfate (SDS) using acetonitrile/methanol as solvent

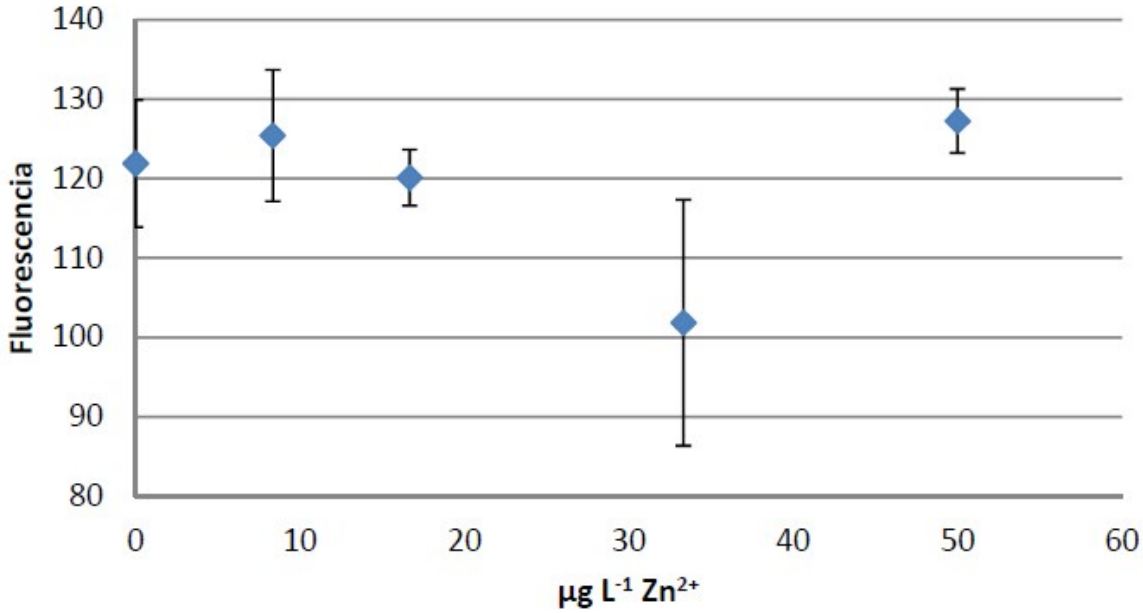

Fig. S19. Variation of the fluorescence emission spectrum of H_2L/tetramethylammonium with the addition of Zn^{2+} in the presence of SDBS

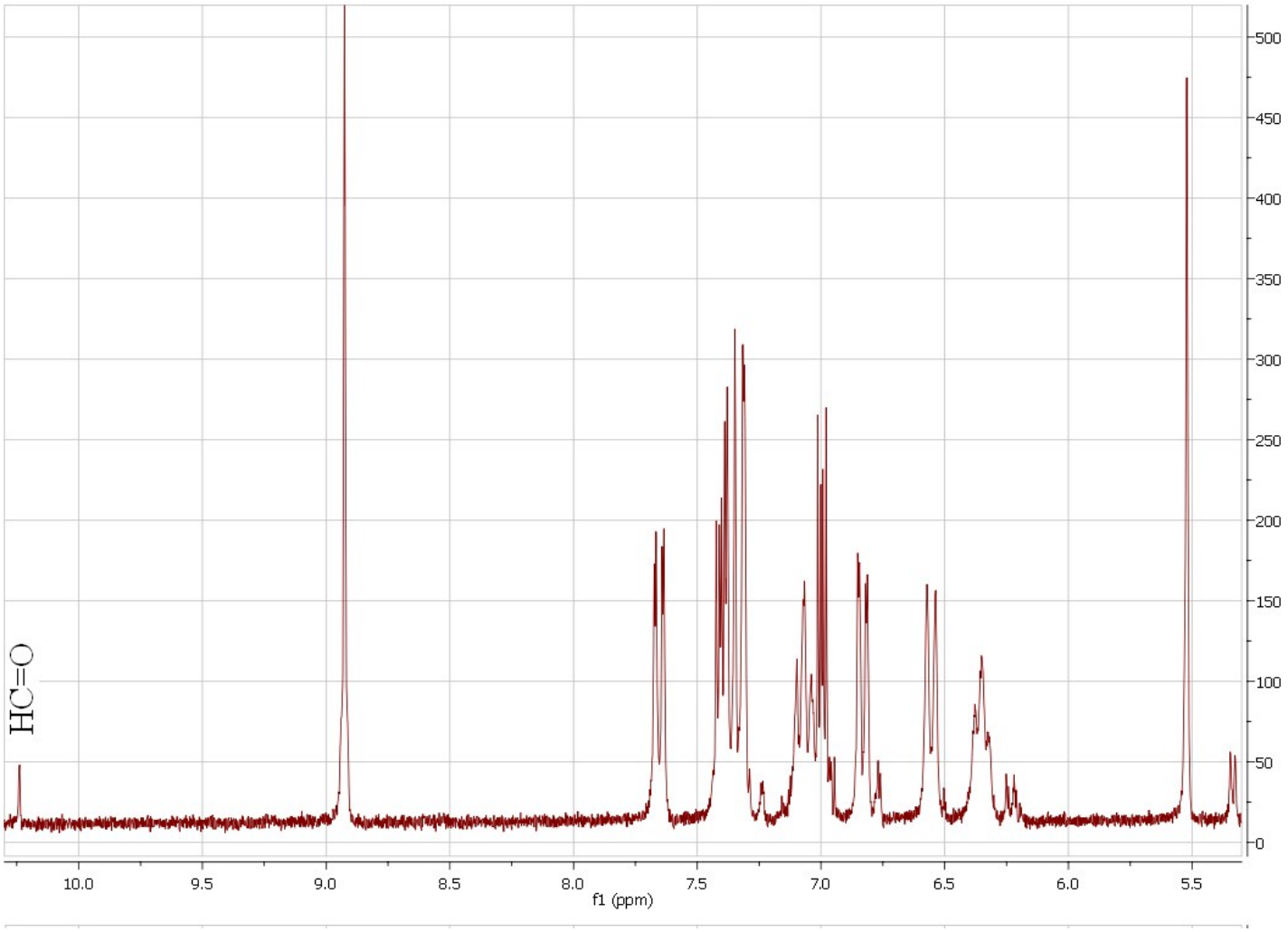

Fig. S20. ^{1}H NMR spectrum of H_2L/tetramethylammonium hydroxide after 3 h in an acetonitrile-d_3/methanol-d_4 solution. Low-intensity signals attributed to 2-hydroxybenzaldehyde and 2,6-diaminotriptycene can be observed. The signal attributed to HC=O of 2-hydroxybenzaldehyde has been marked