Supplementary Information **Open Access**

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Supplement: Synthesis, characterization, second and third order non-linear optical properties and luminescence properties of 1,10-phenanthroline-2,9-di(carboxaldehyde phenylhydrazone) and its transition metal complexes

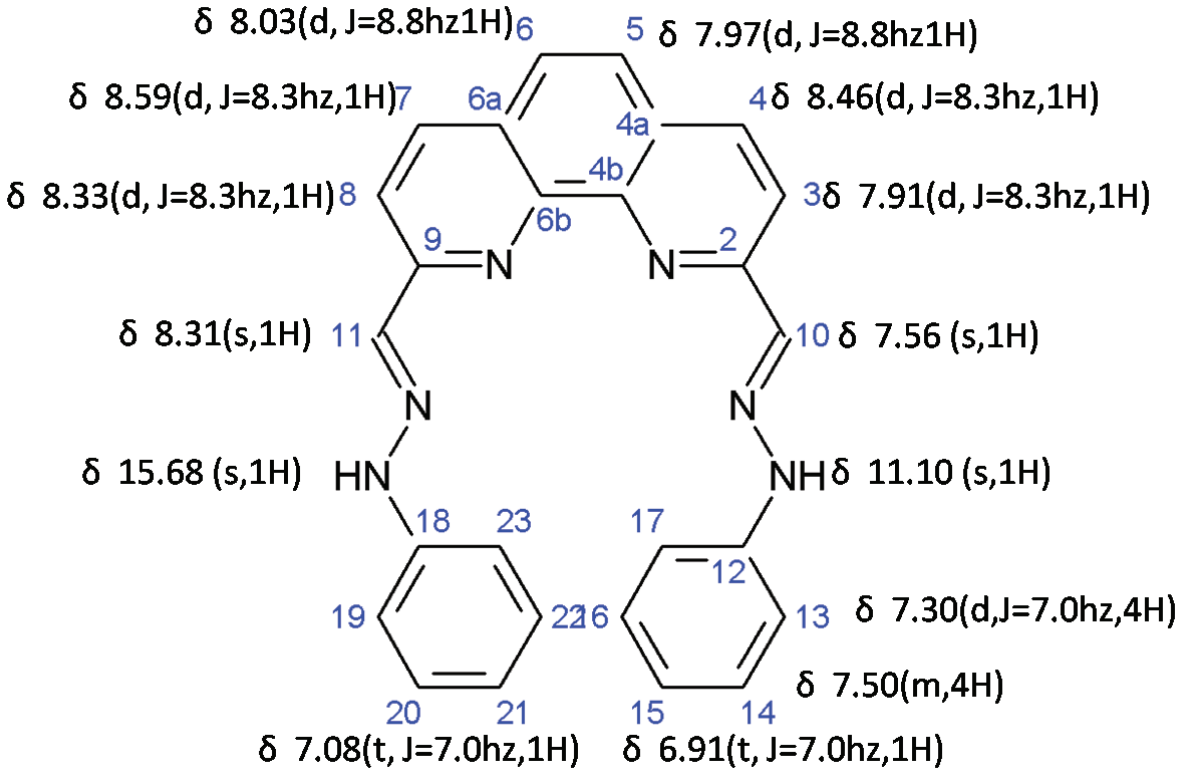

Figure S1: PMR assignment of L

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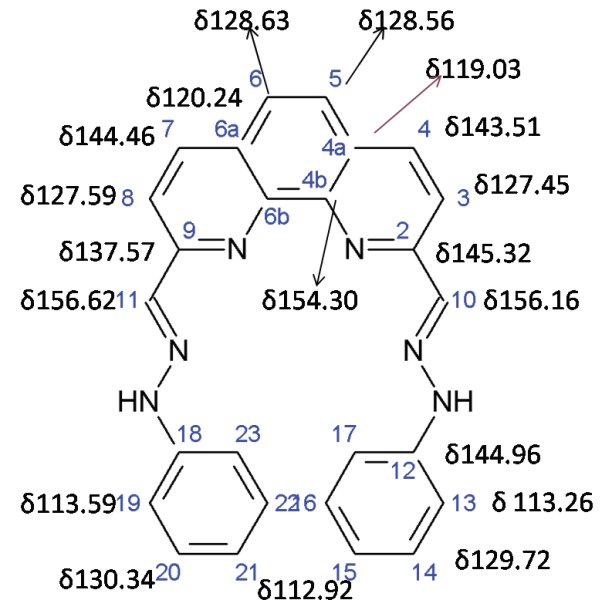


Figure S2: ^{13}C NMR assignment of L.

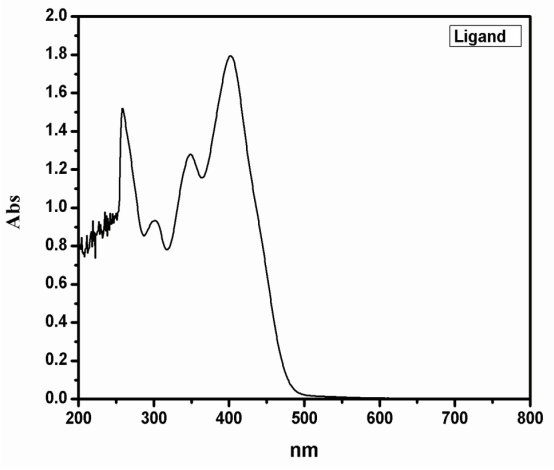


Figure S3: UV-Vis spectrum of L.

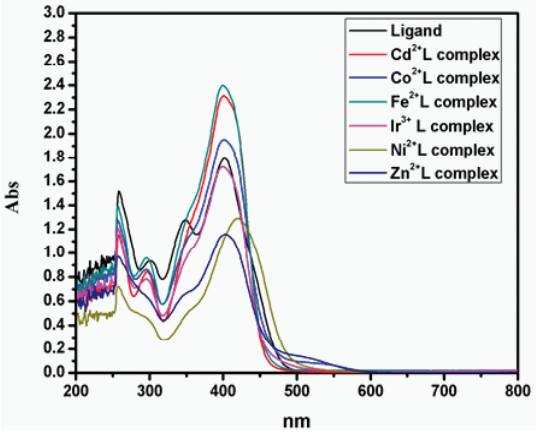
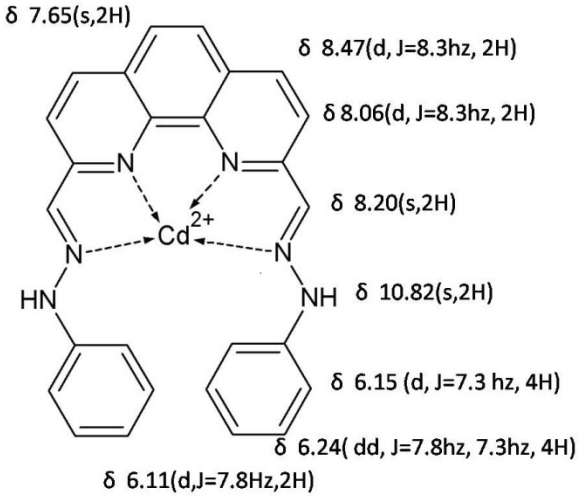


Figure S4: UV-Vis spectra of L and its complexes.



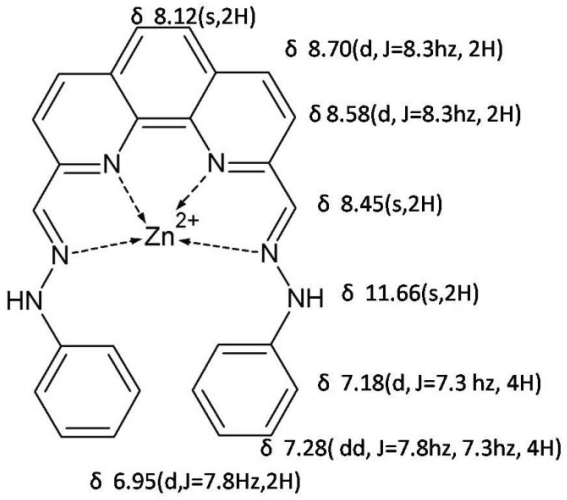


Figure S5: PMR assignments of Cd^{2+} and Zn^{2+} complexes.

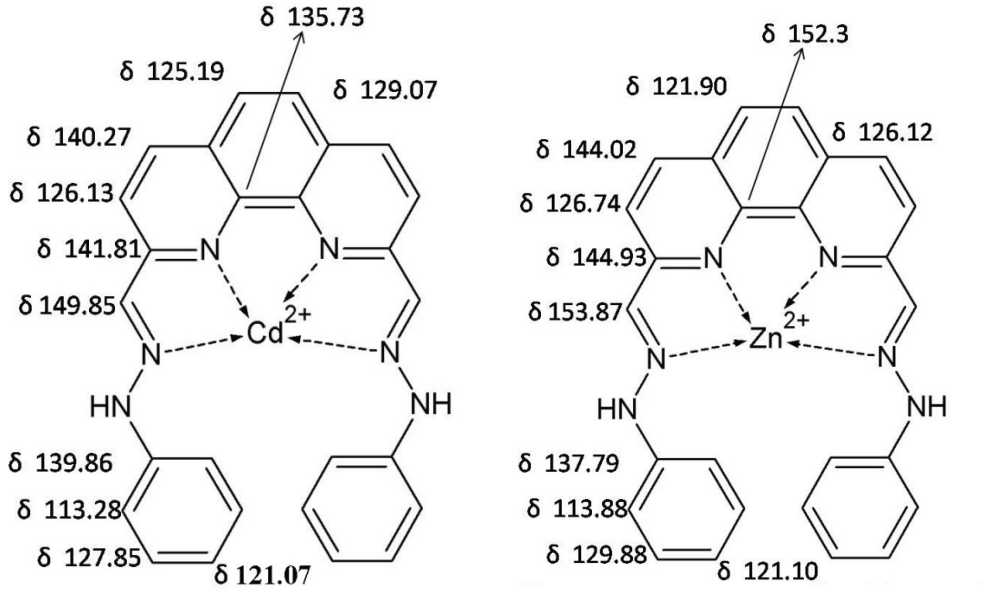
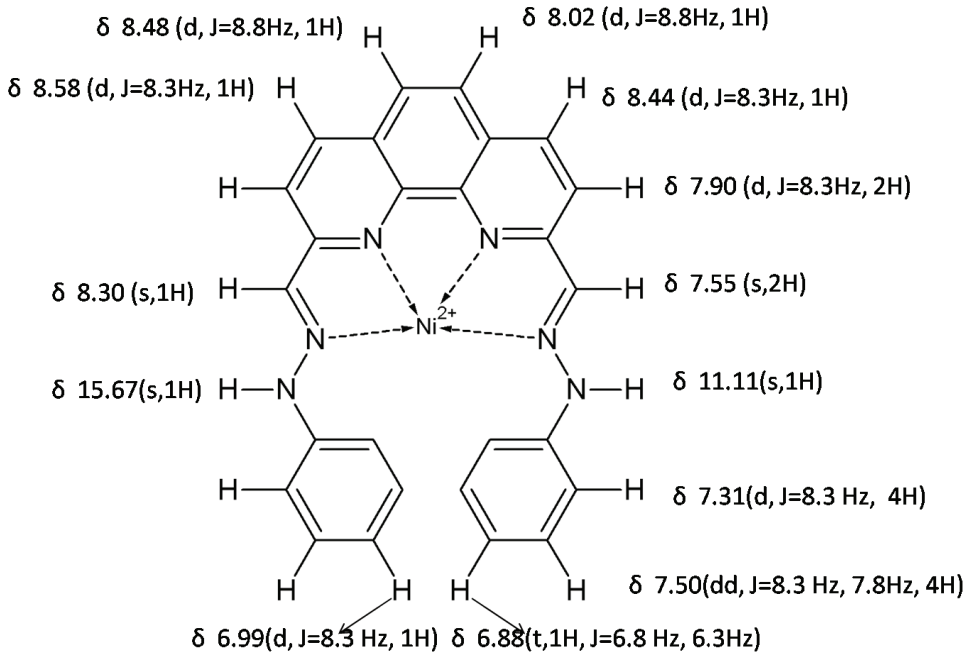
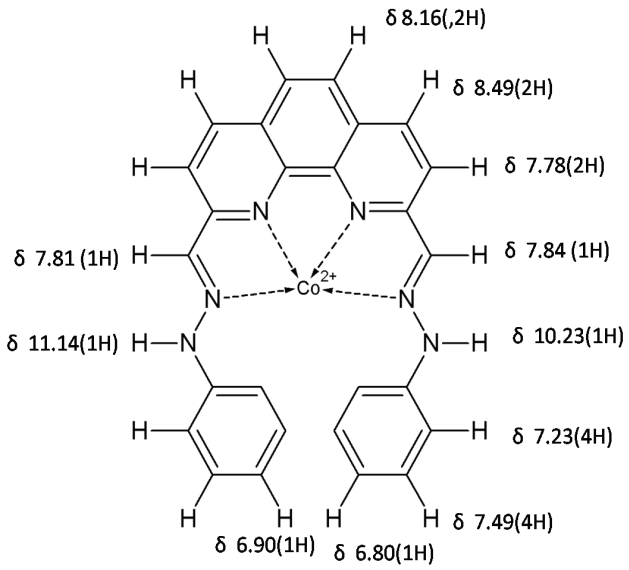


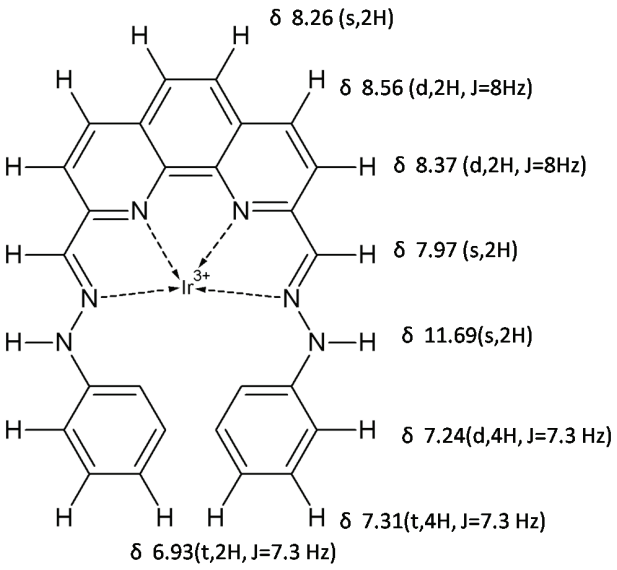
Figure S6: 1^{3C}NMR assignments of Cd^{2+} and Zn^{2+} complexes.



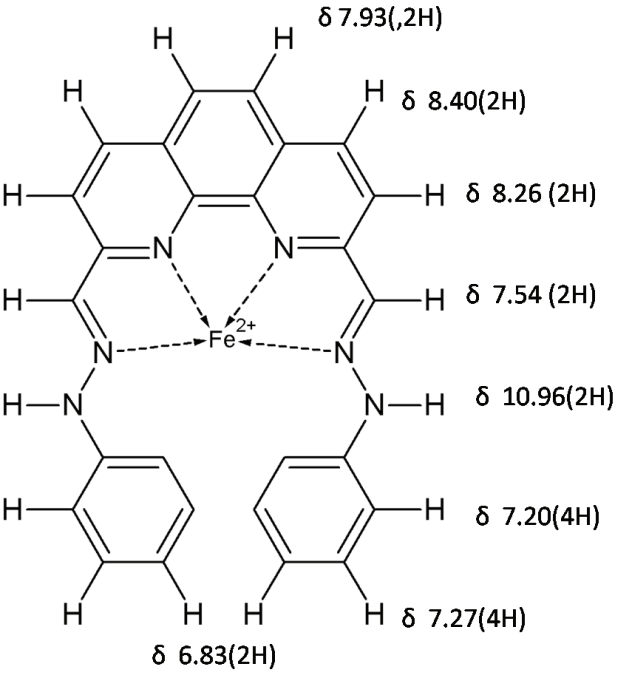
FigureS7: Paramagnetic PMR assignment of Ni(II) complex.



FigureS8: Paramagnetic PMR assignment of Co(II) complex.



FigureS10: Paramagnetic PMR assignment of Ir(III) complex.



FigureS9: Paramagnetic PMR assignment of Fe(II) complex.

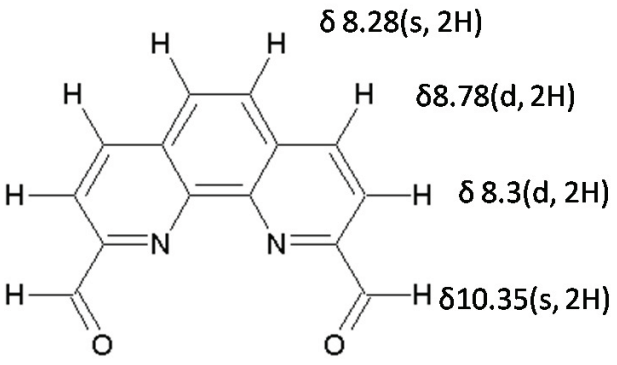


Figure S11: PMR assignment of Phen dialdehyde.

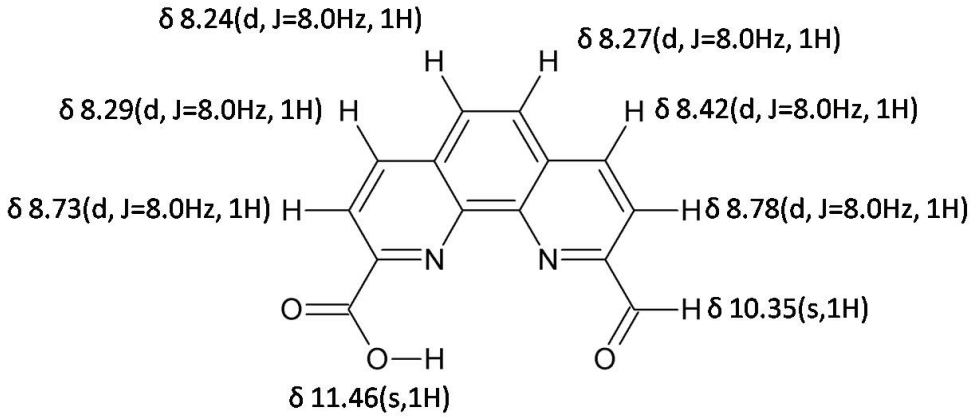


Figure S12: PMR assignment of 1,10-Phenanthroline-9-al-2-carboxylic acid.