

Supplementary Material

Synthesis, characterization and *in-vitro* antibacterial proprieties of Mn(II) and Mg(II) complexes with azo ligand derived from *p*-acetamidophenol and benzidine

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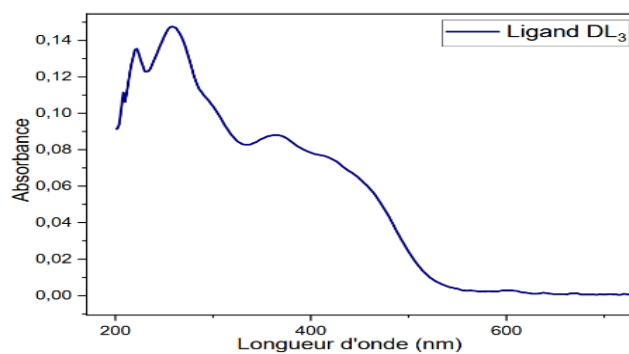
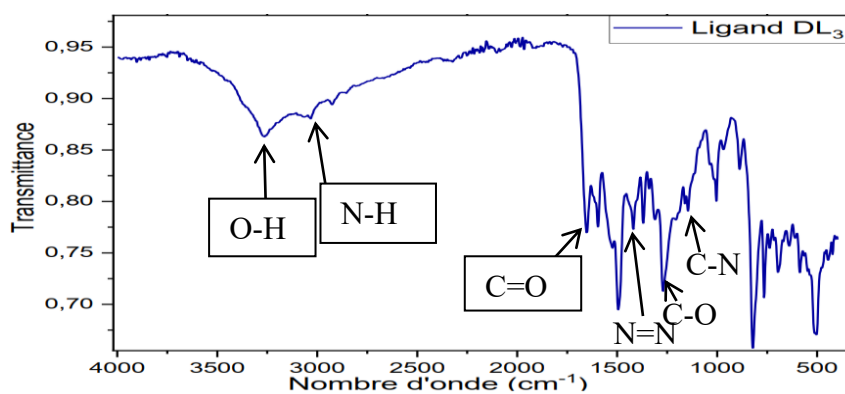
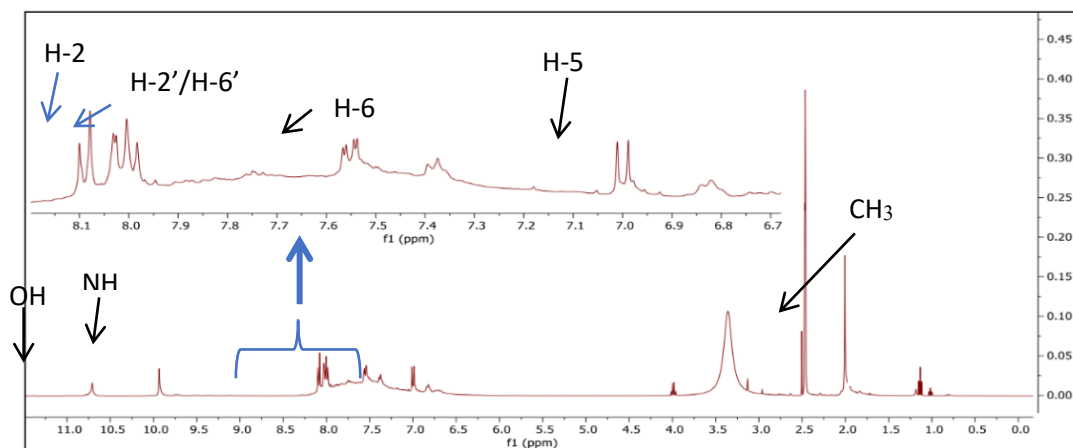
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**Figure S1:** UV spectrum of ligand **4** in ethanol**Figure S2:** IR spectrum of ligand **4****Figure S3:** ^1H -NMR ($\text{DMSO-}d_6$, 400 MHz), spectrum of ligand **4**

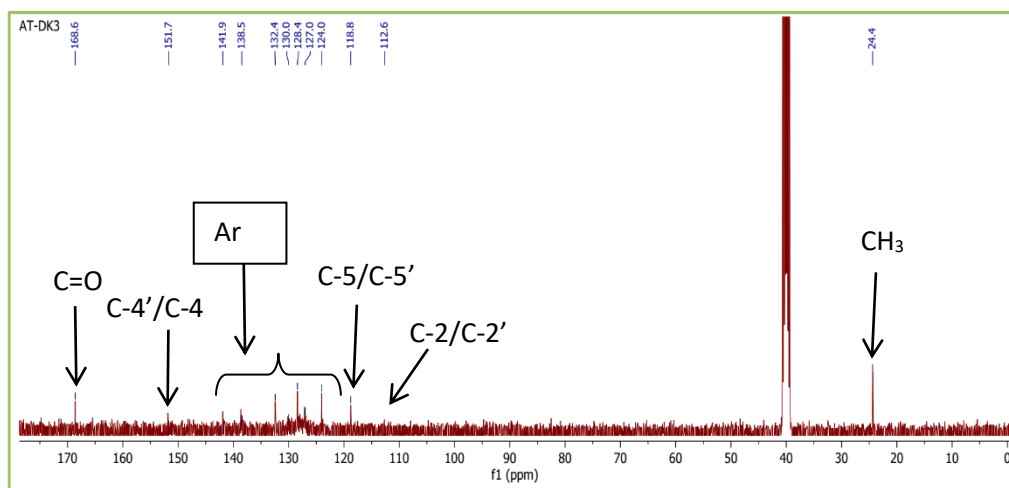


Figure S4: ^{13}C -NMR (DMSO- d_6 , 100 MHz), spectrum of ligand **4**

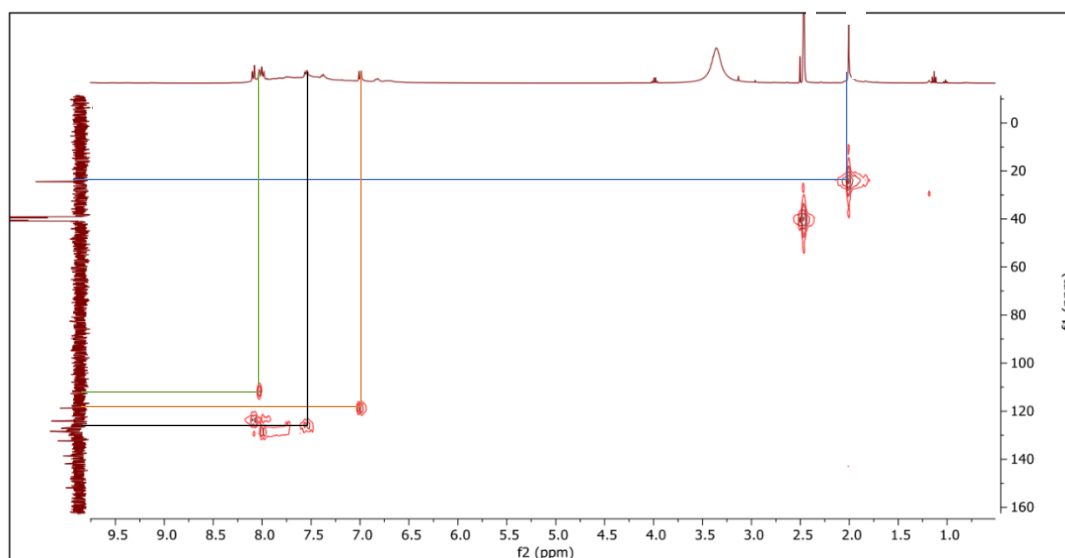


Figure S5: HSQC spectrum of ligand **4**

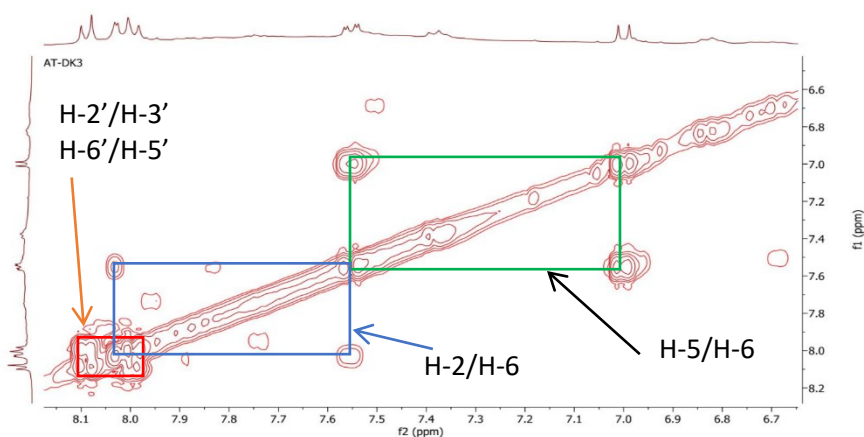
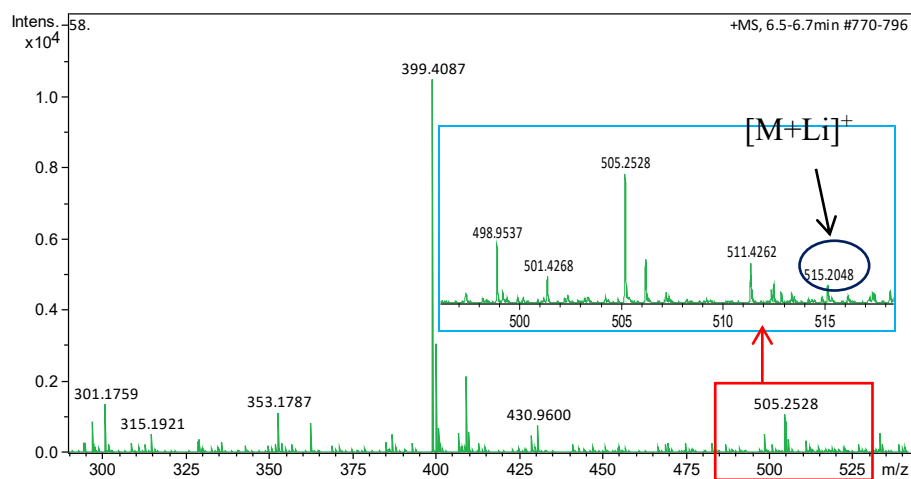
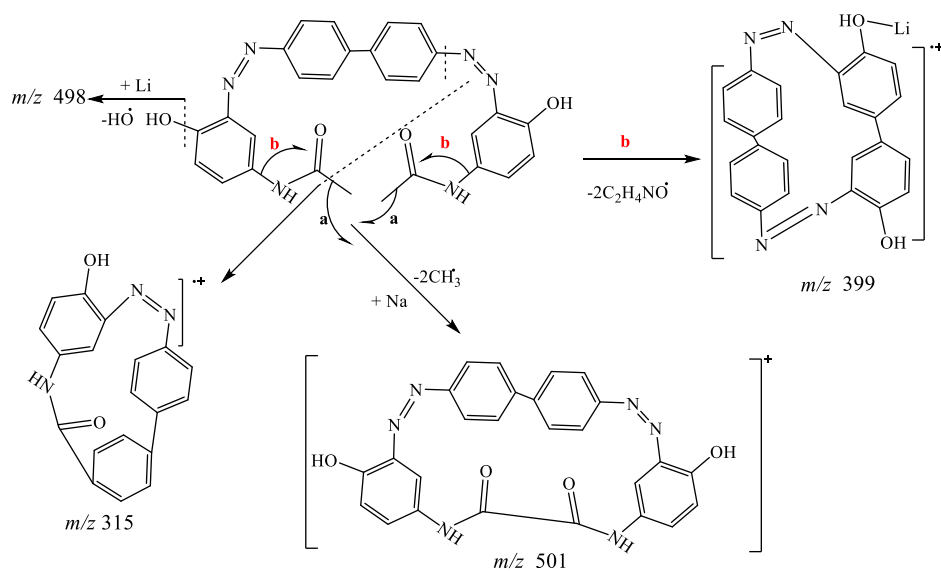
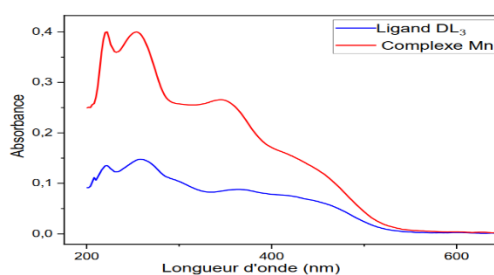


Figure S6: ^1H - ^1H COSY spectrum of ligand **4**

Figure S7: HRMSESI+ of ligand **4**Scheme S2: Fragmentation patterns of ligand **4**Figure S8: UV spectrum of complex **5** (red) and the ligand **4** (blue) in ethanol

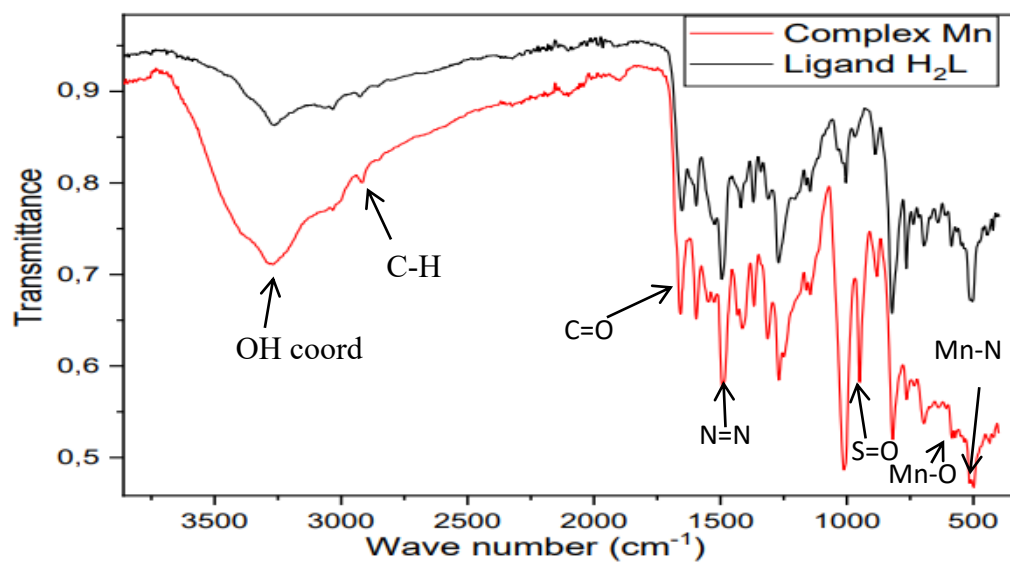


Figure S9: Comparative IR spectrum of complex **5** (red) with those of ligand **4** (black)

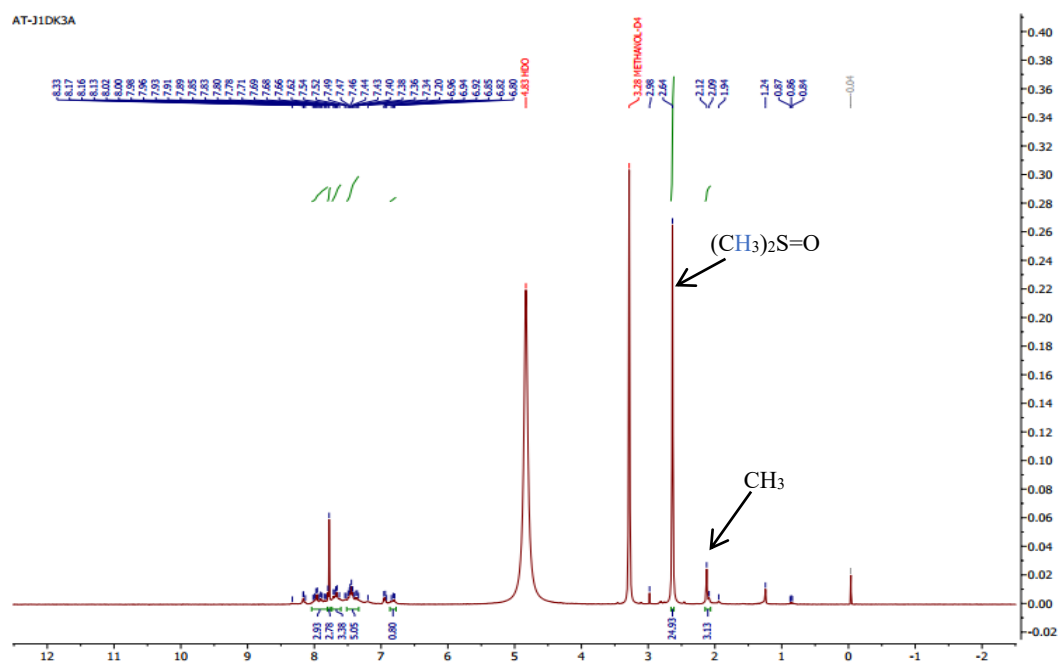


Figure S10: ^1H -NMR spectrum ($\text{CD}_3\text{OD}/\text{CDCl}_3$, 400 MHz) of complex **5**

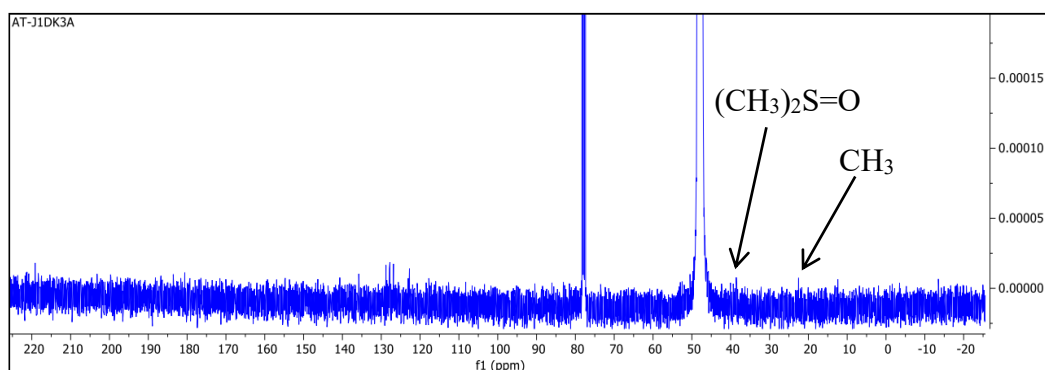
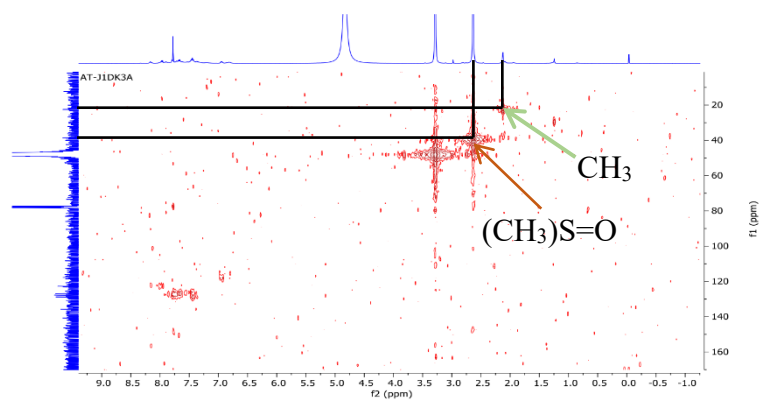
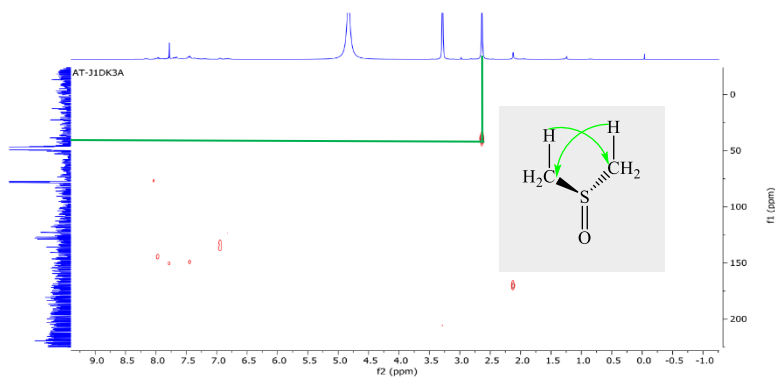
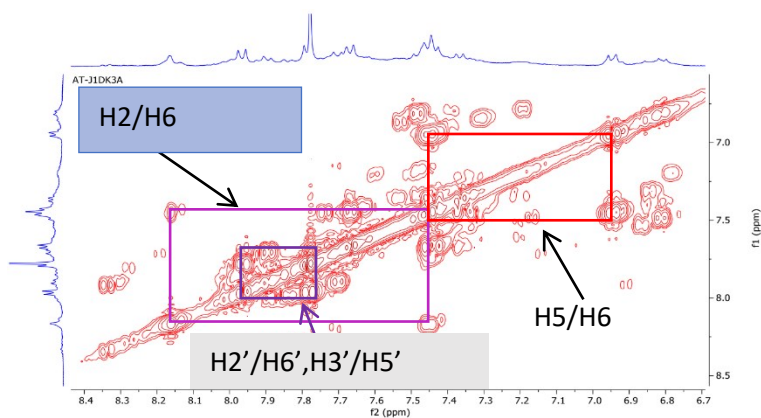


Figure S11: Comparison of the ^{13}C -NMR spectra ($\text{CD}_3\text{OD}/\text{CDCl}_3$, 100 MHz) of complex **5**

**Figure S12:** HSQC spectrum of complex 5**Figure S13:** HMBC spectrum of complex 5**Figure S14:** ^1H - ^1H COSY spectrum of complex 5

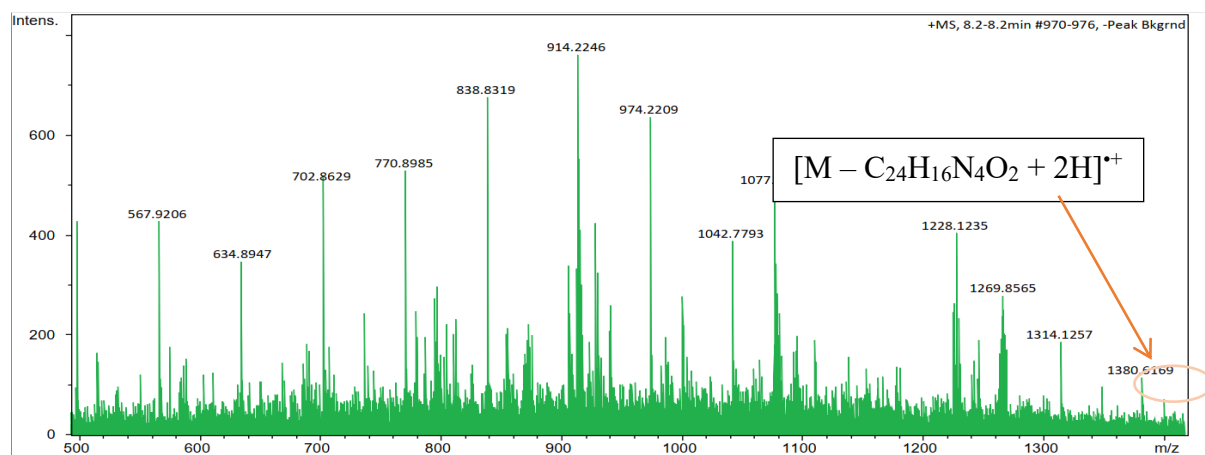
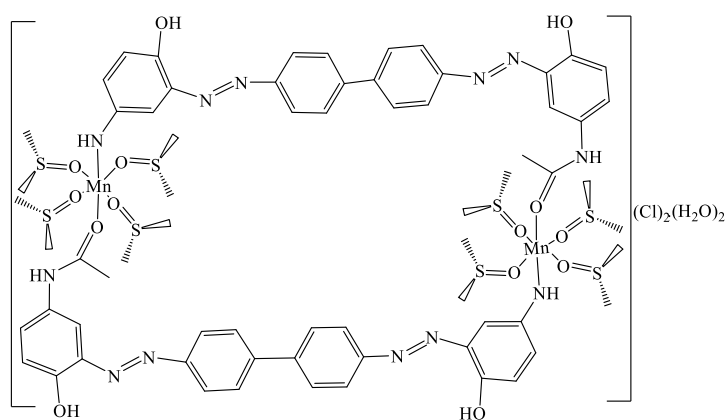
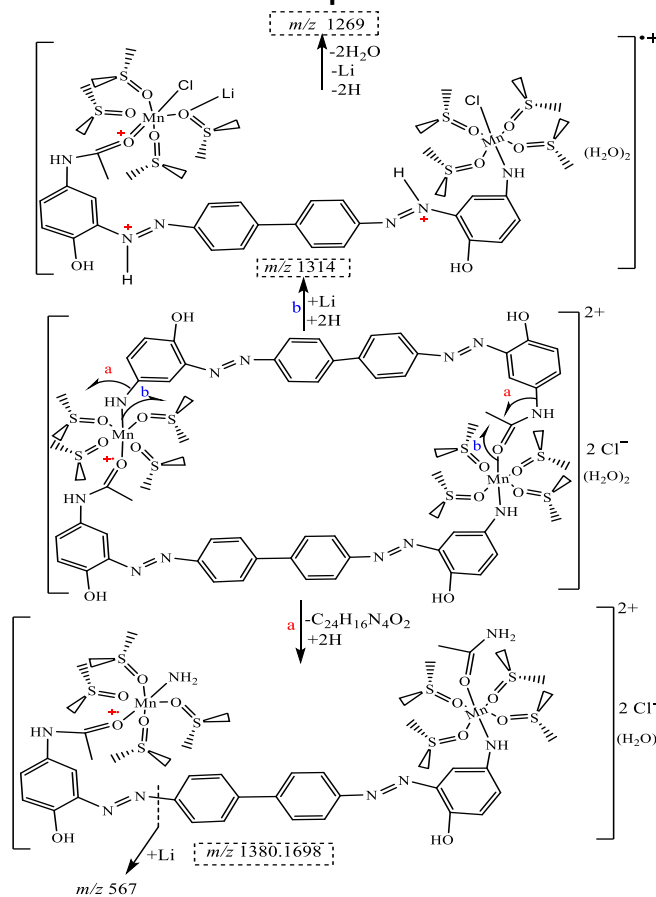


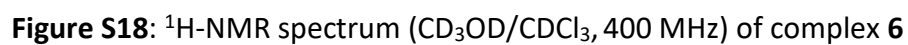
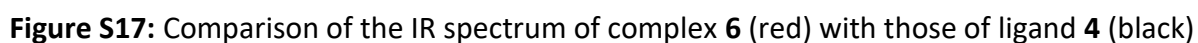
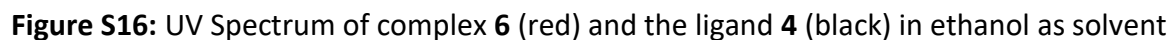
Figure S15: MSESI+ spectrum of complex 5



Complex 5



Scheme S3: Fragmentation pattern of complex 5



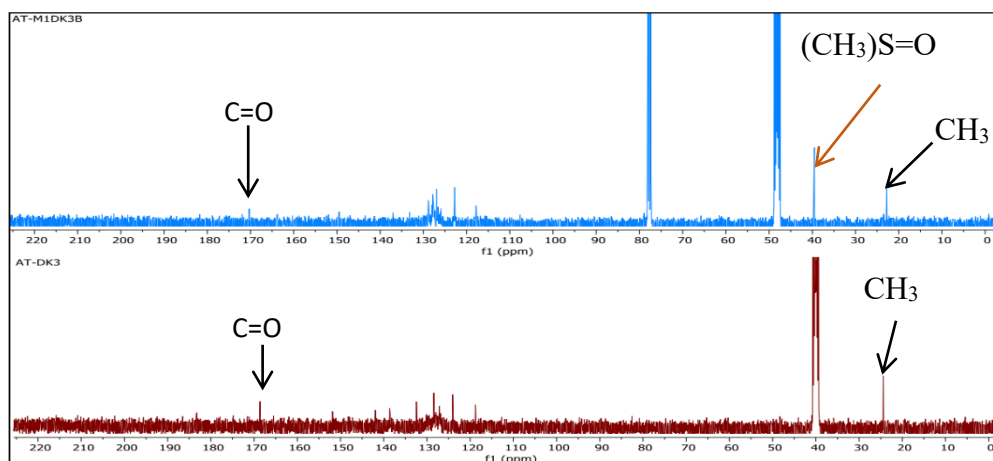


Figure S19: Comparative ^{13}C -NMR spectra (DMSO- d_6 , 100 MHz), of complex 6 (blue) and ligand 4 (red)

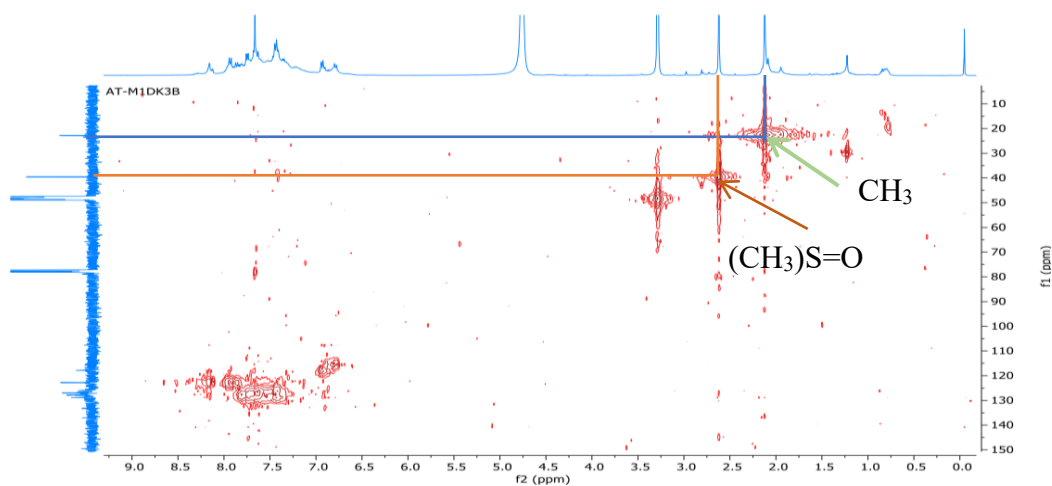


Figure S20: HSQC spectrum of complex 6

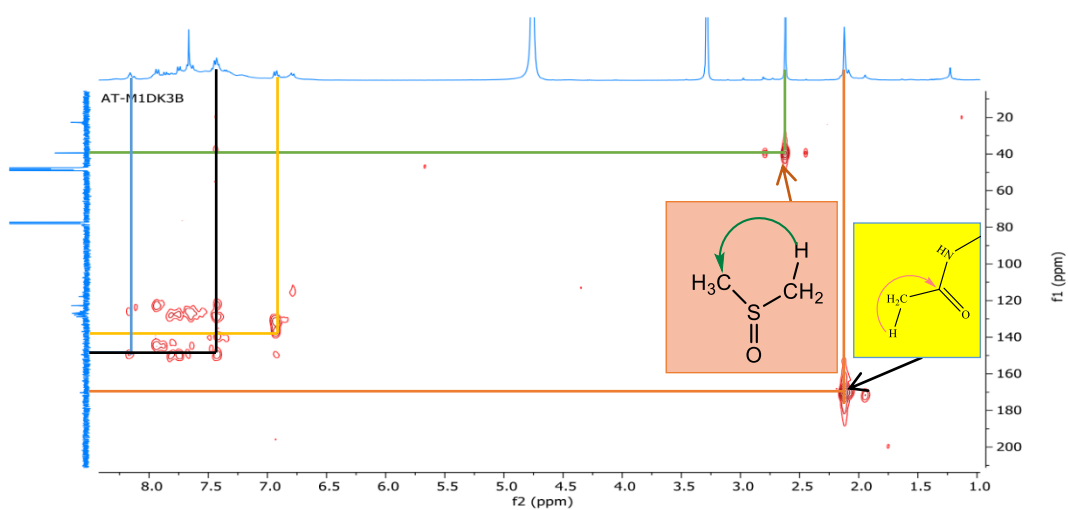
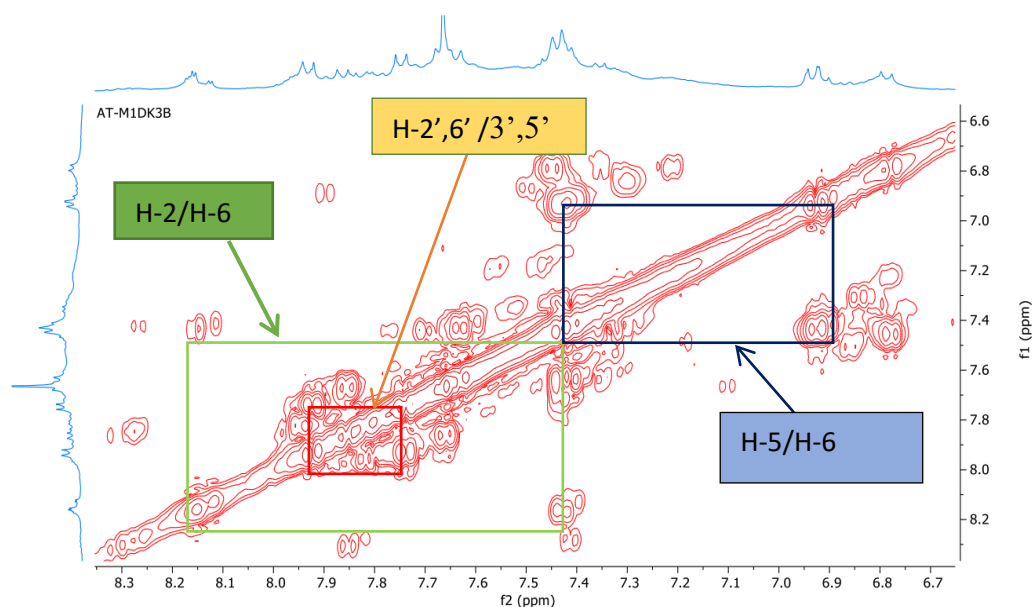
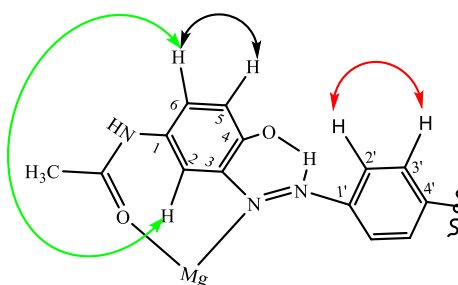
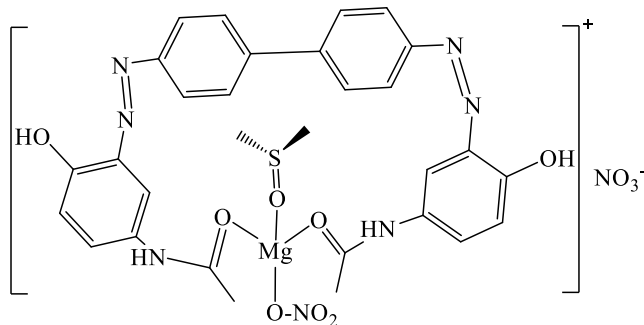


Figure S21: HMBC spectrum of complex 6

Figure S22: ^1H - ^1H COSY of complex 6

Scheme S4 : COSY Corrélation of 6



Complex 6

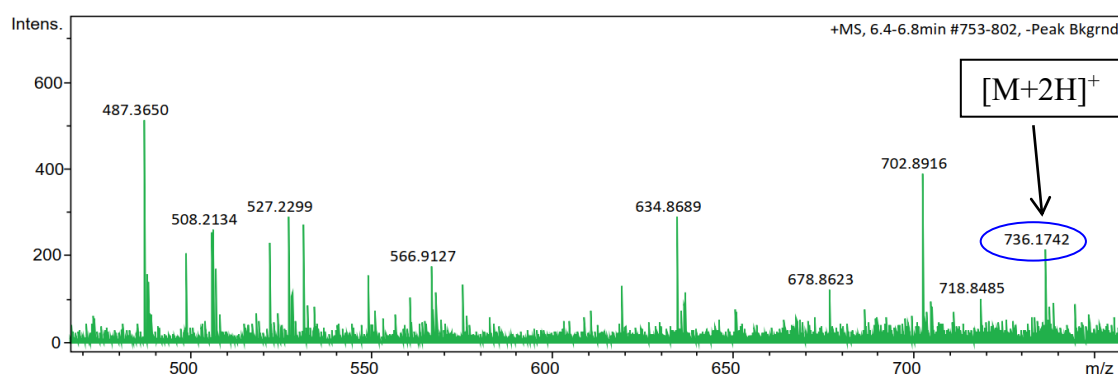
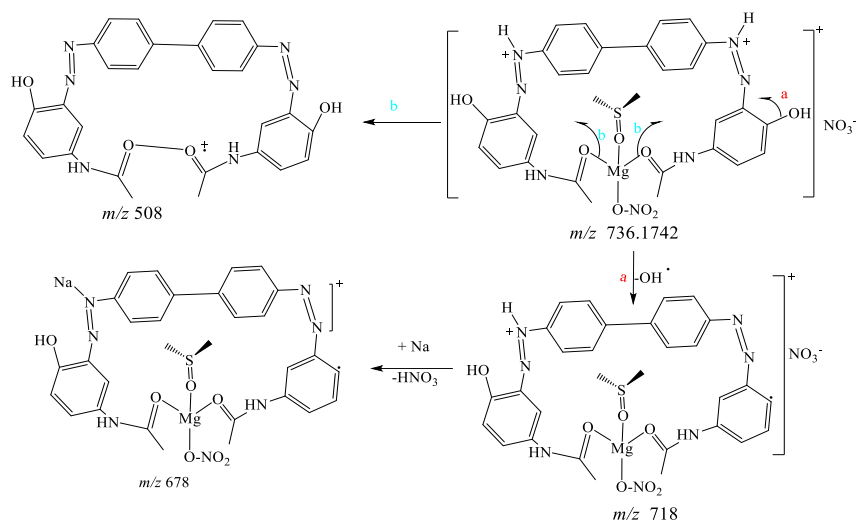


Figure S23: MSES+ spectrum of complex 6

**Scheme S5:** Fragmentation pattern of complex 6