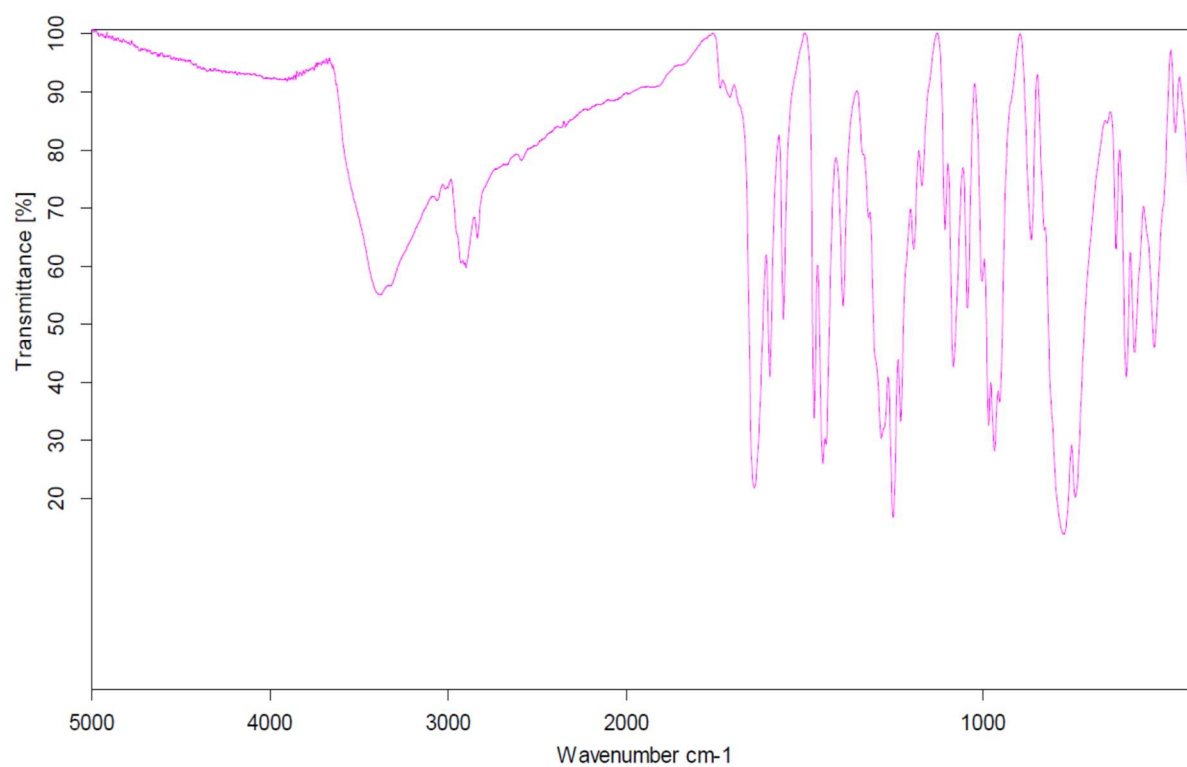
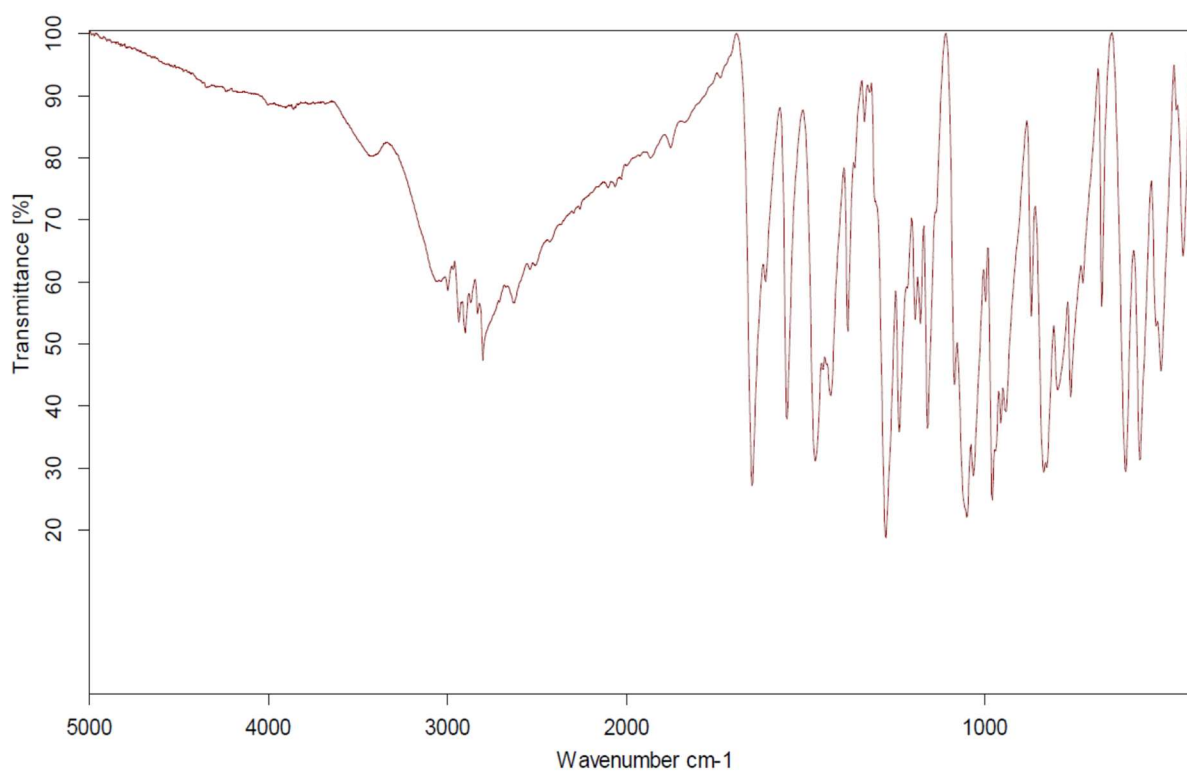


Figure S1. The IR spectra of oxidovanadium(V) complexes.

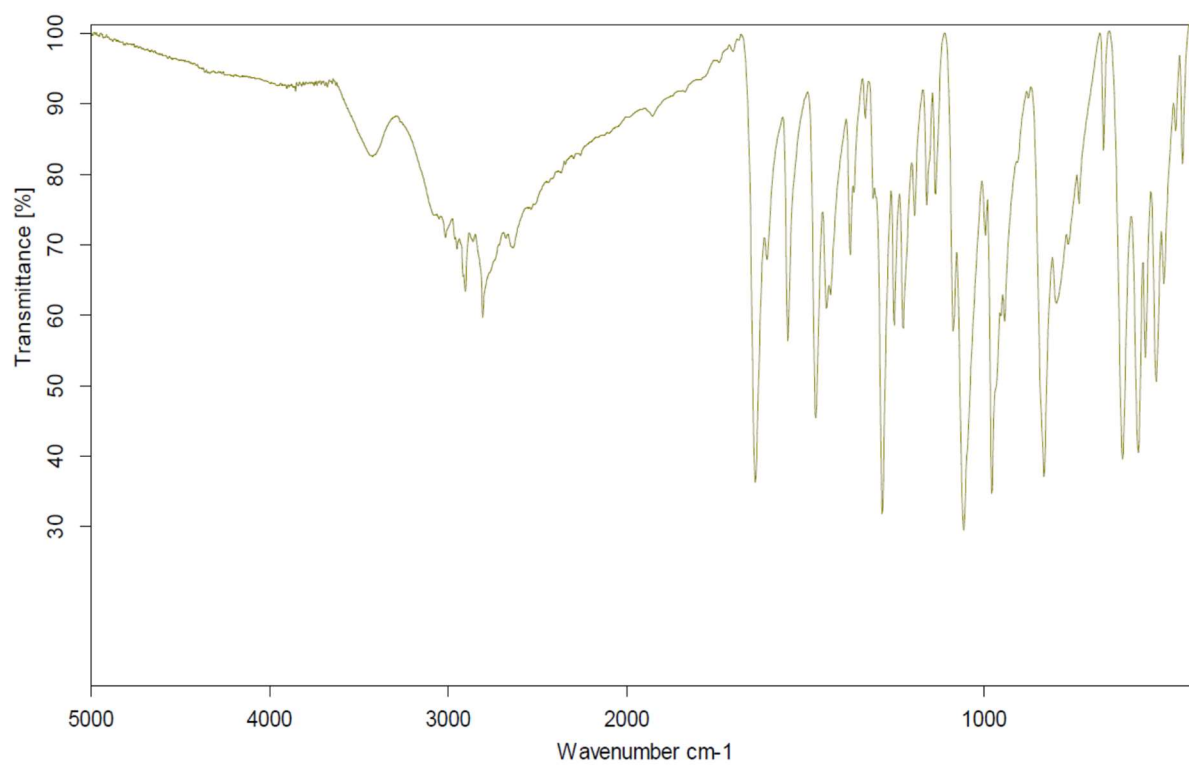
[(+) VOL^1]



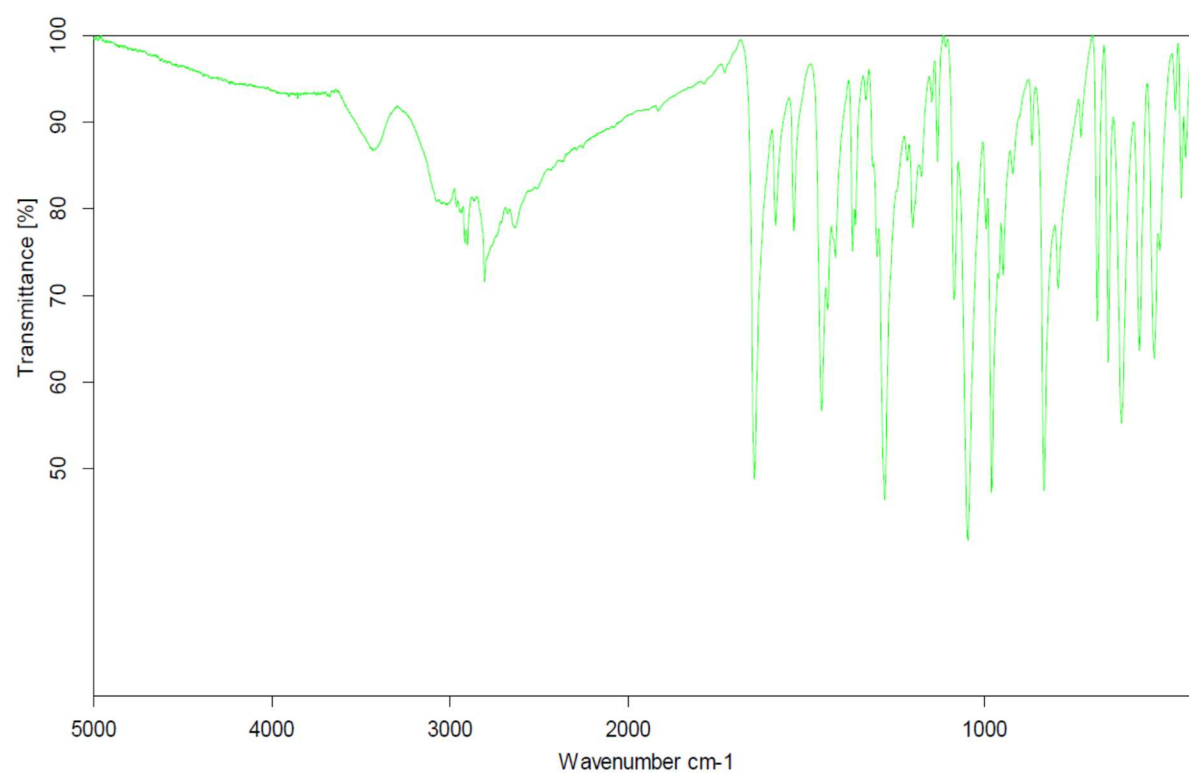
[(+) VOL^2]



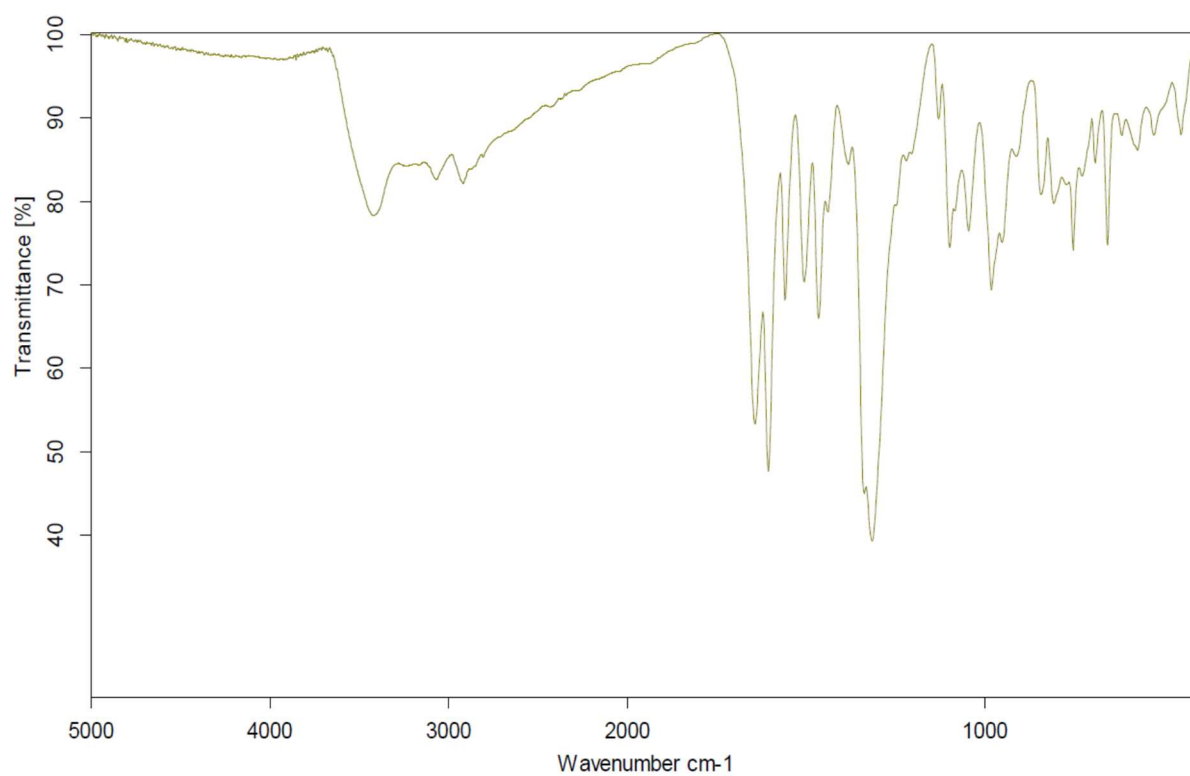
[(+)-VOL³]



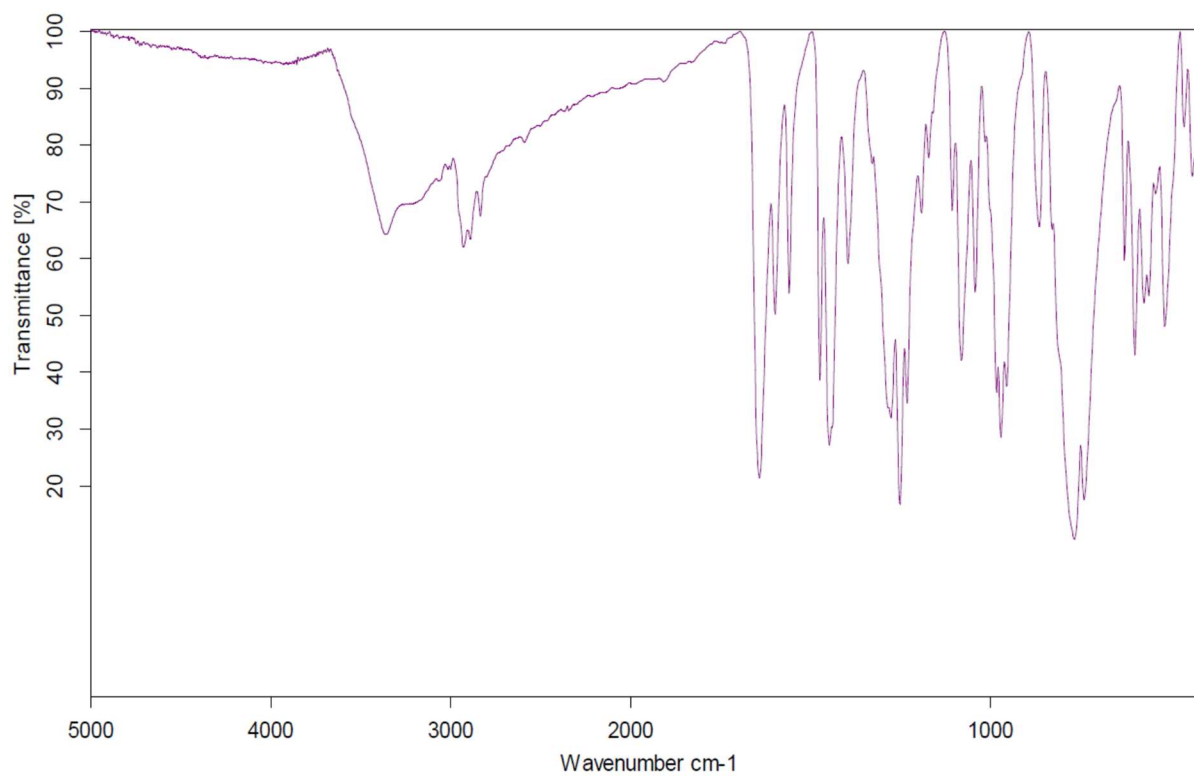
[(+)-VOL⁴]



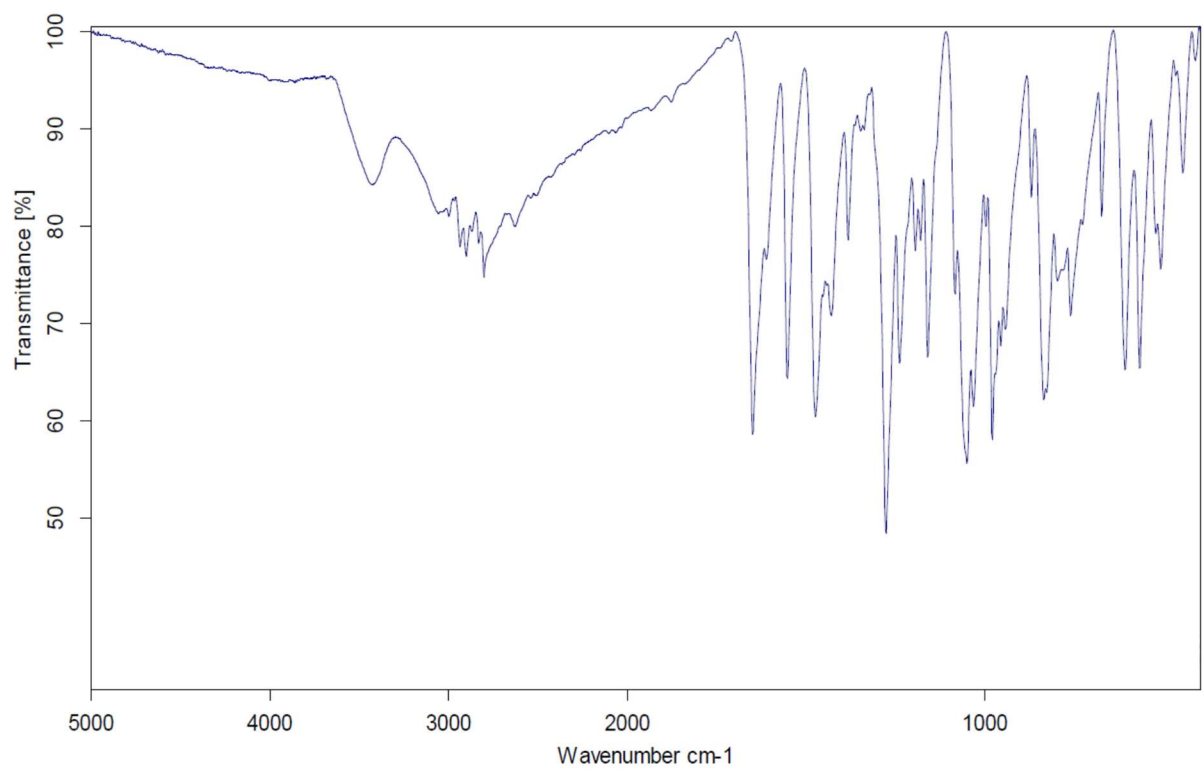
[(+)-VOL⁵]



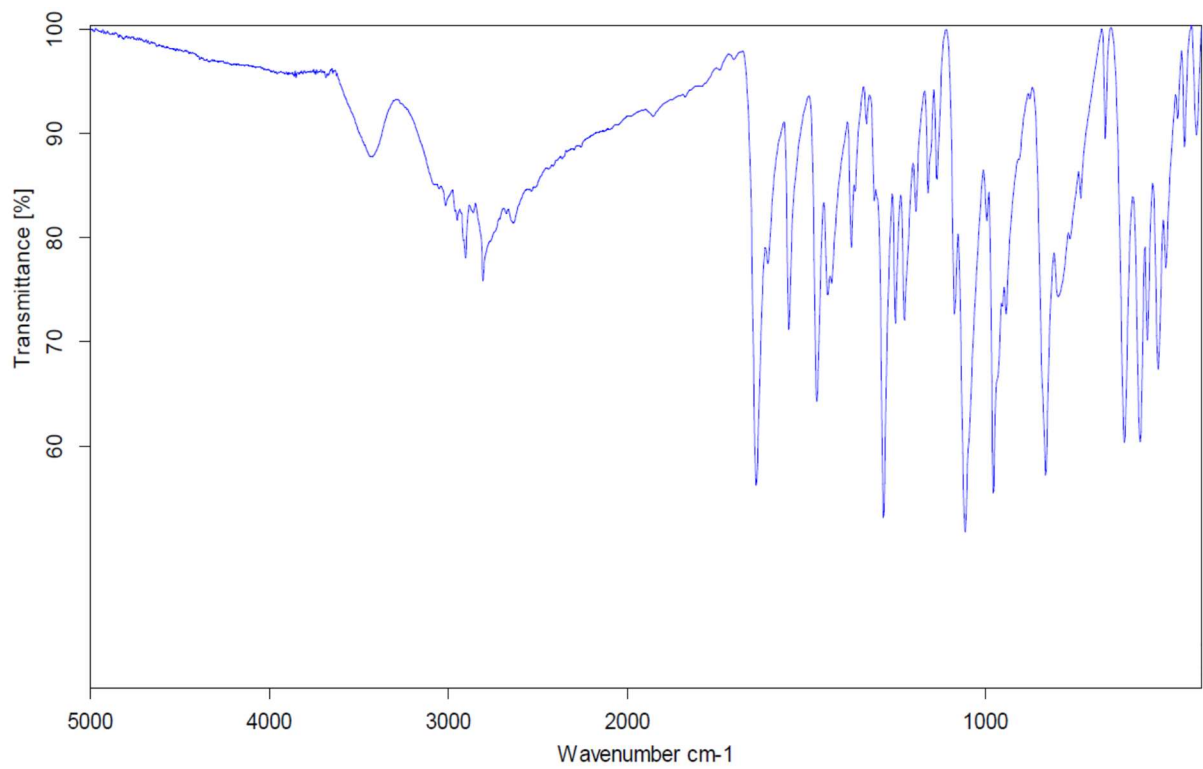
[(-)-VOL¹]



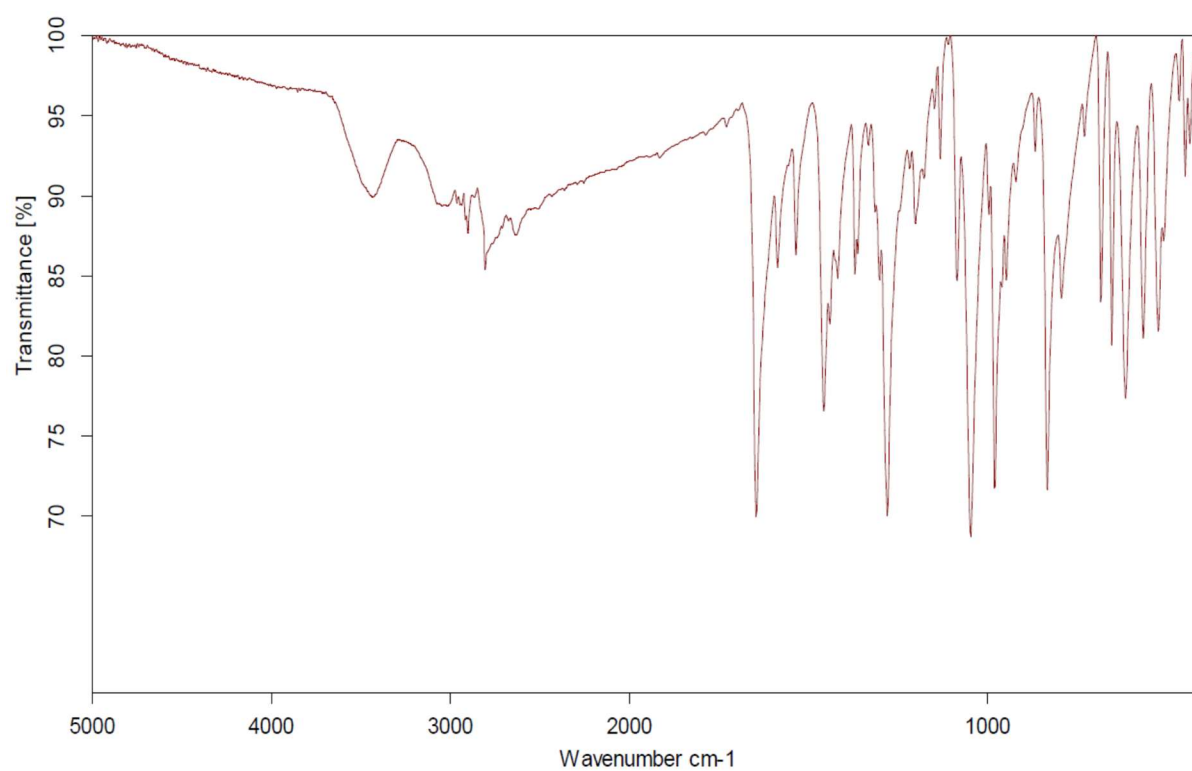
[(-)VOL²]



[(-)VOL³]



[(-)VOL⁴]



[(-)VOL⁵]

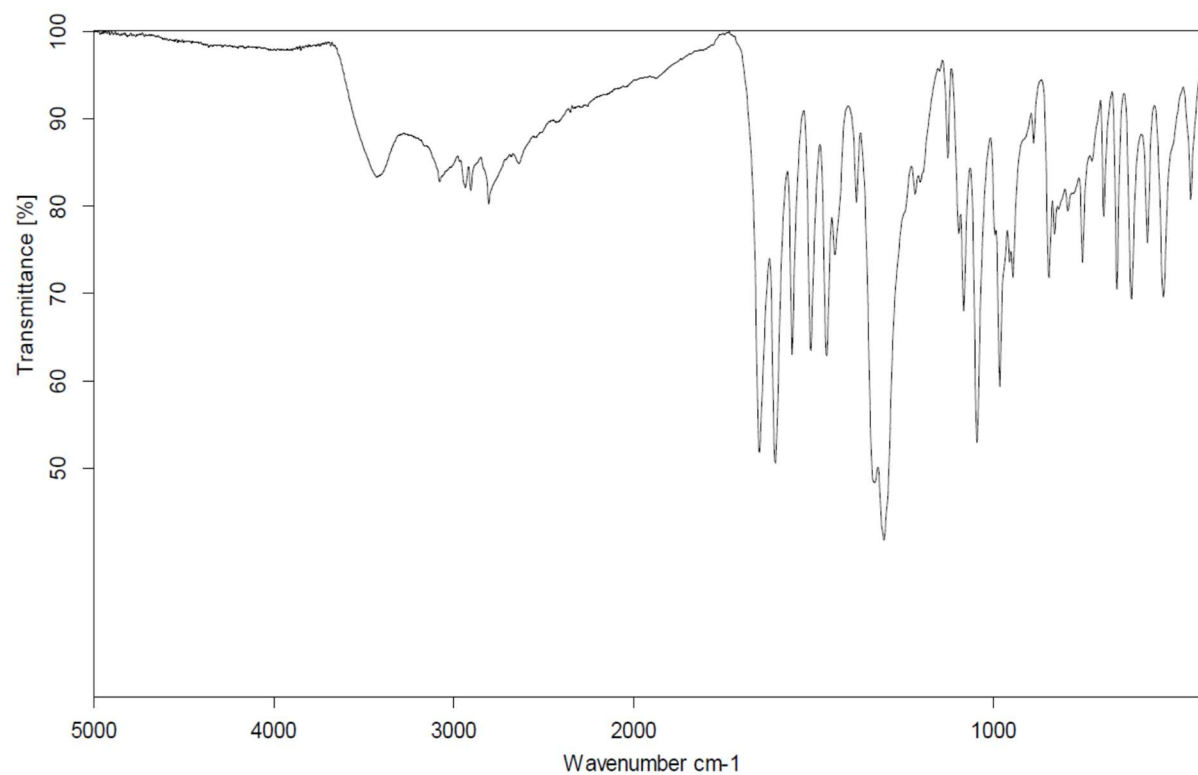
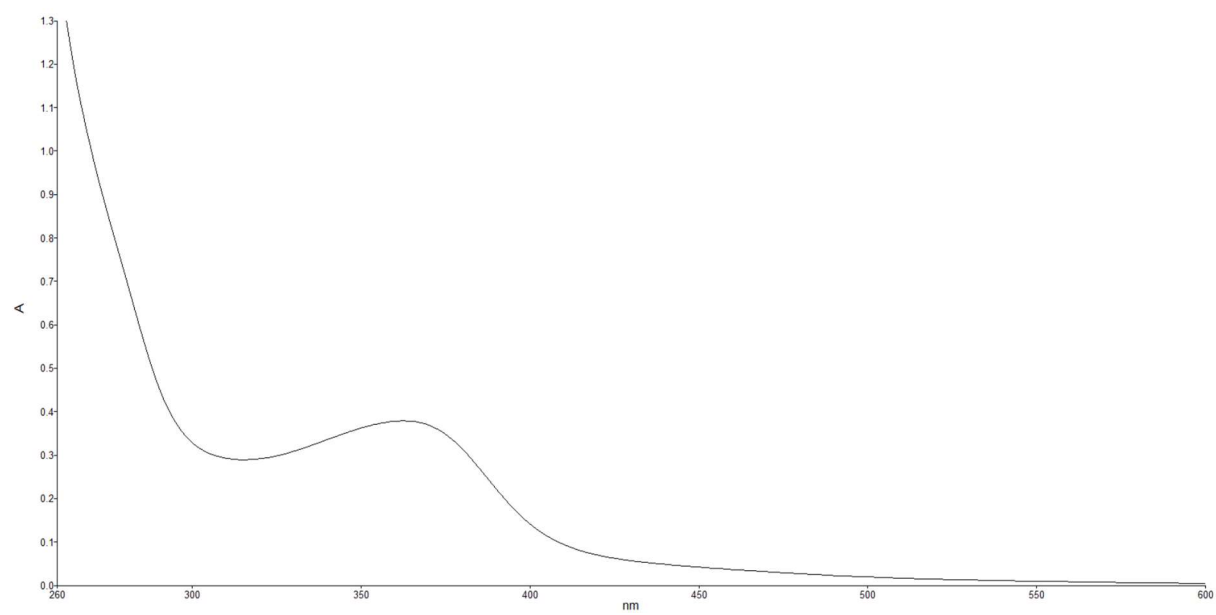


Figure S2. The UV-Vis spectra of **[(+) VOL^4]** and **[(-) VOL^4]** complexes.

[(+) VOL^4]



[(-) VOL^4]

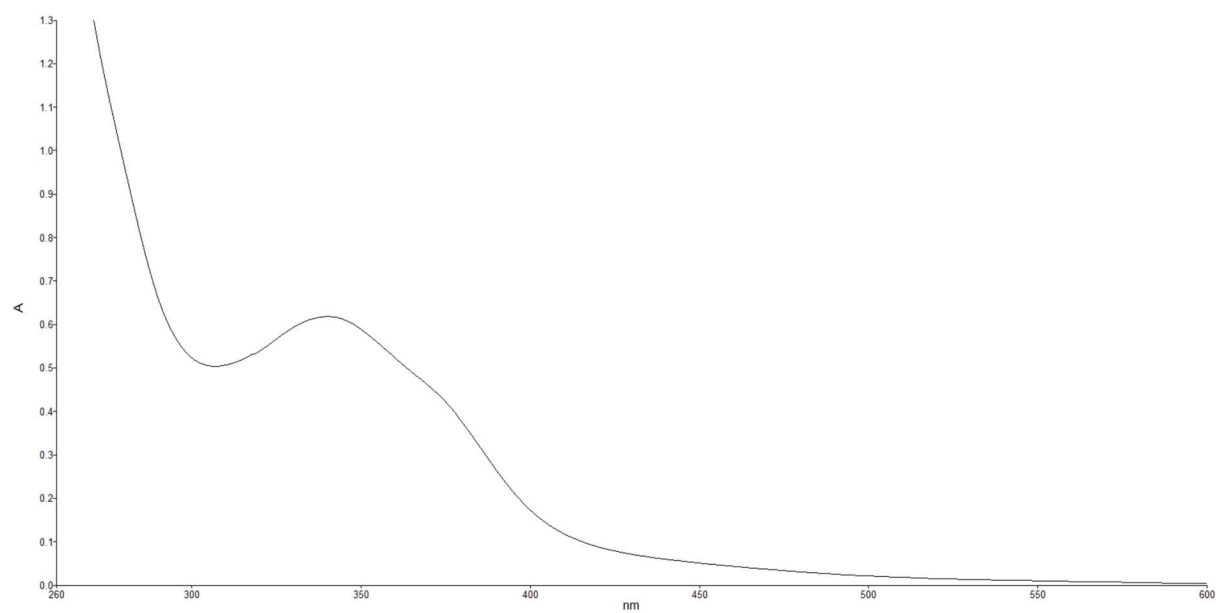
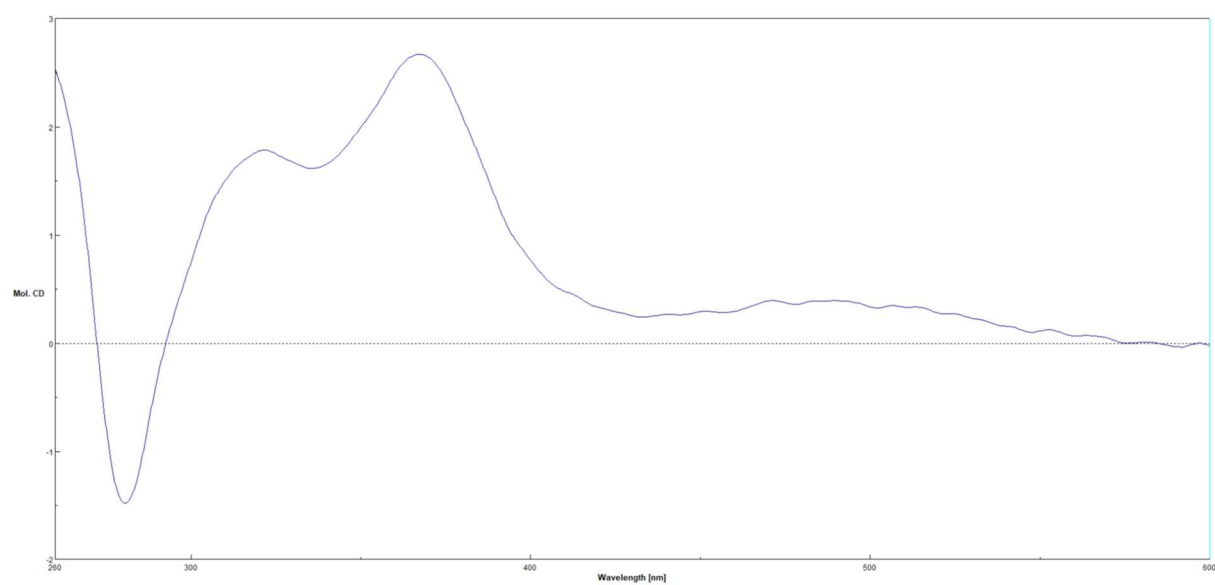


Figure S3. The CD spectra of [(+)**VOL**⁴] and [(-)**VOL**⁴] complexes.

[(+)**VOL**⁴]



[(-)**VOL**⁴]

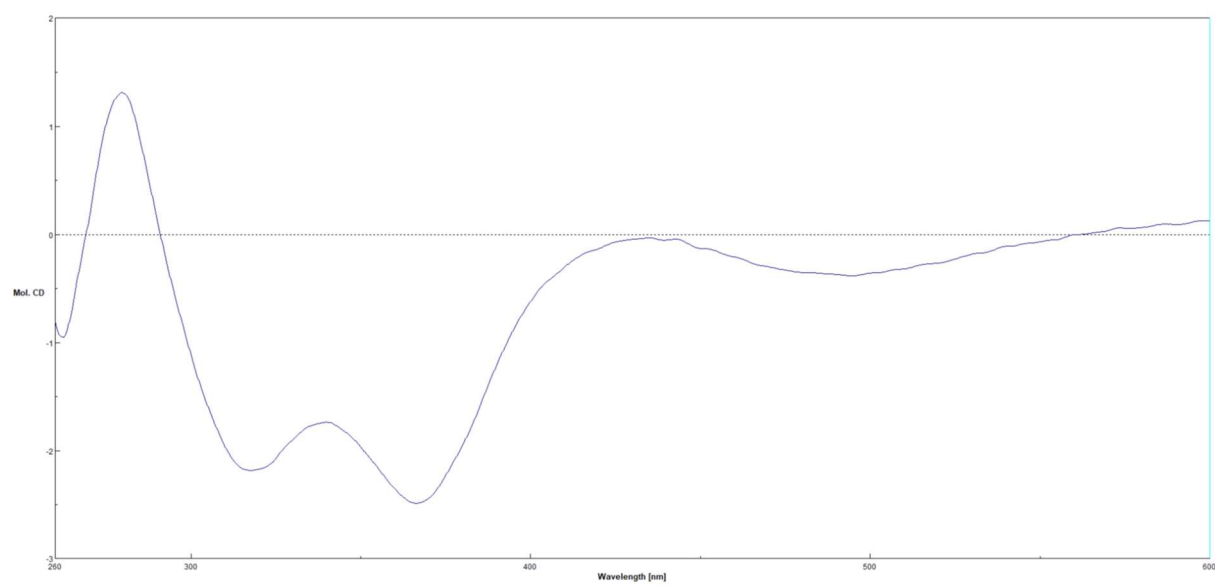
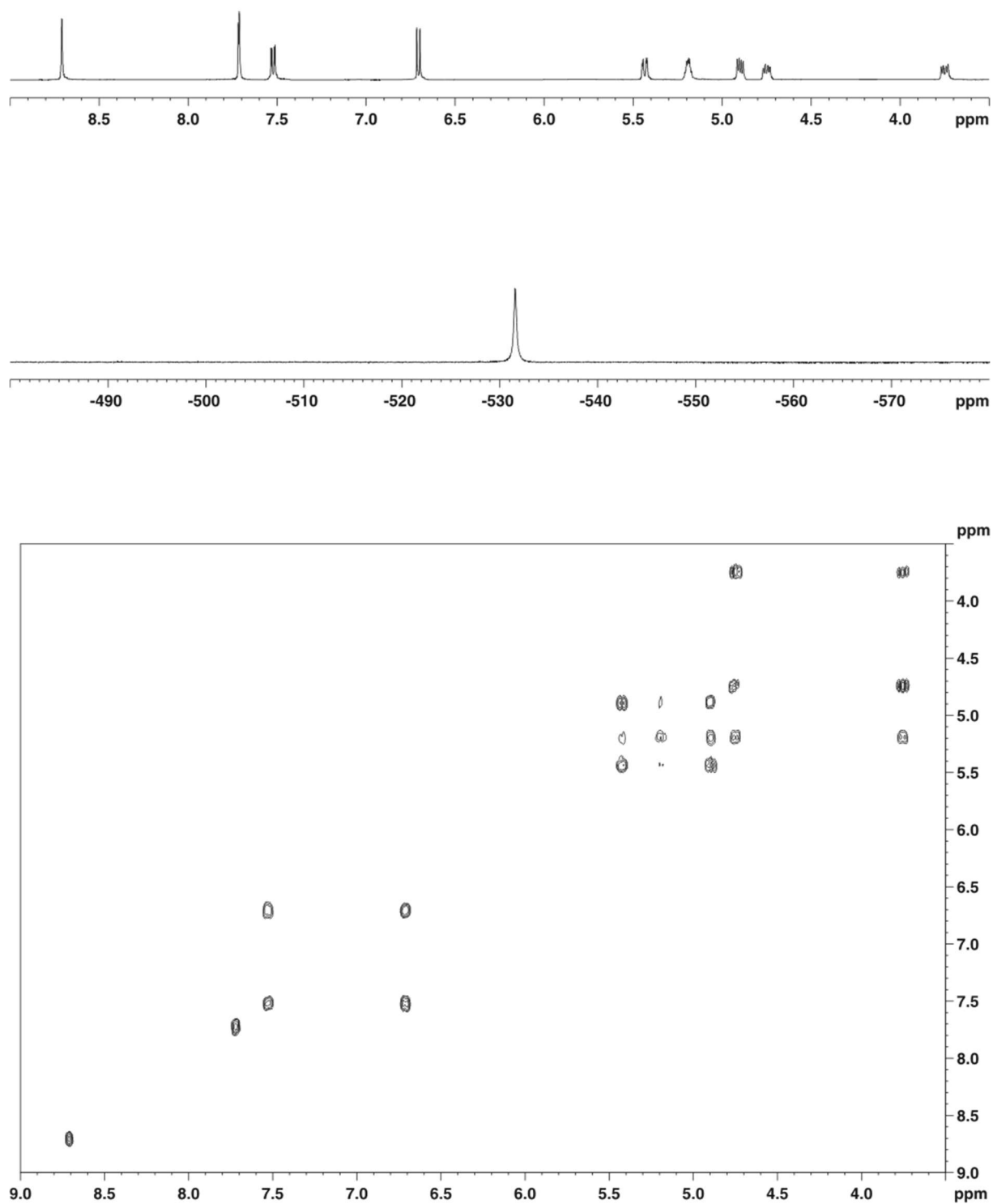
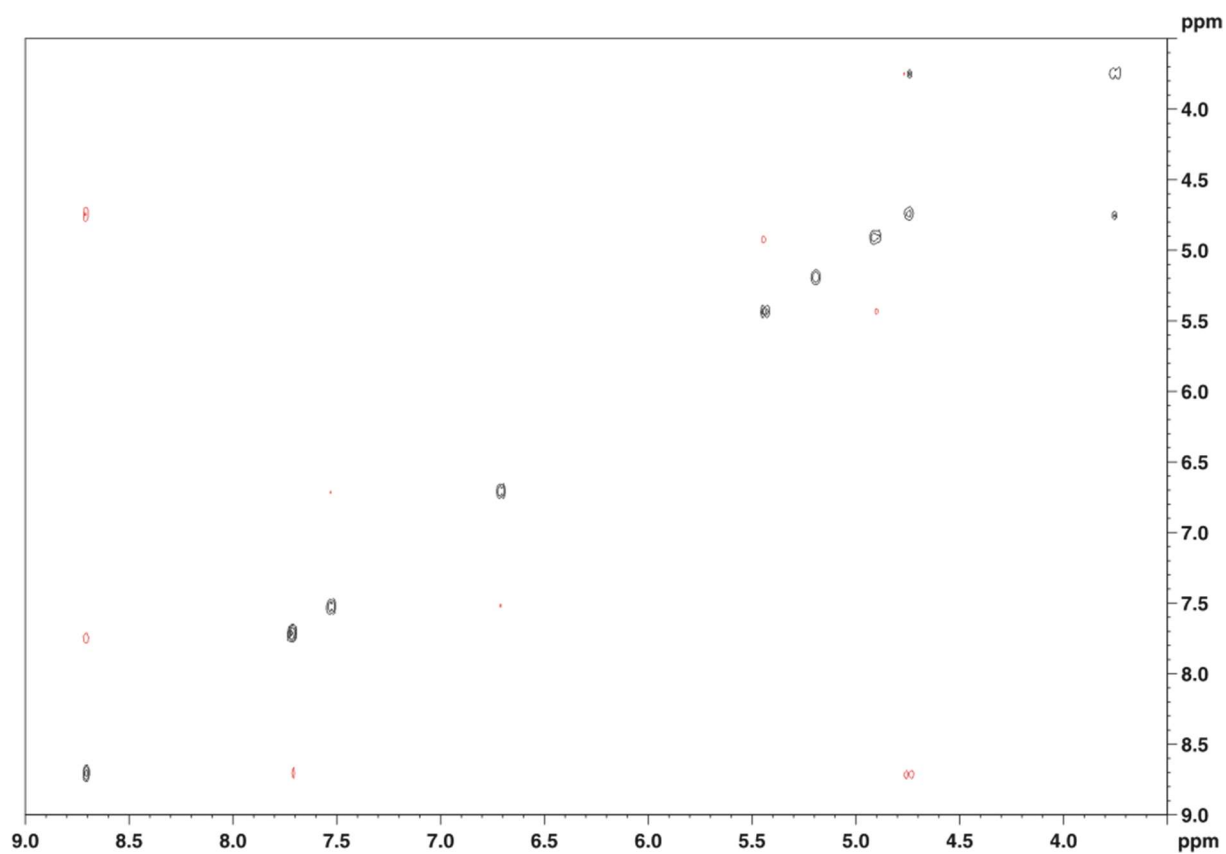


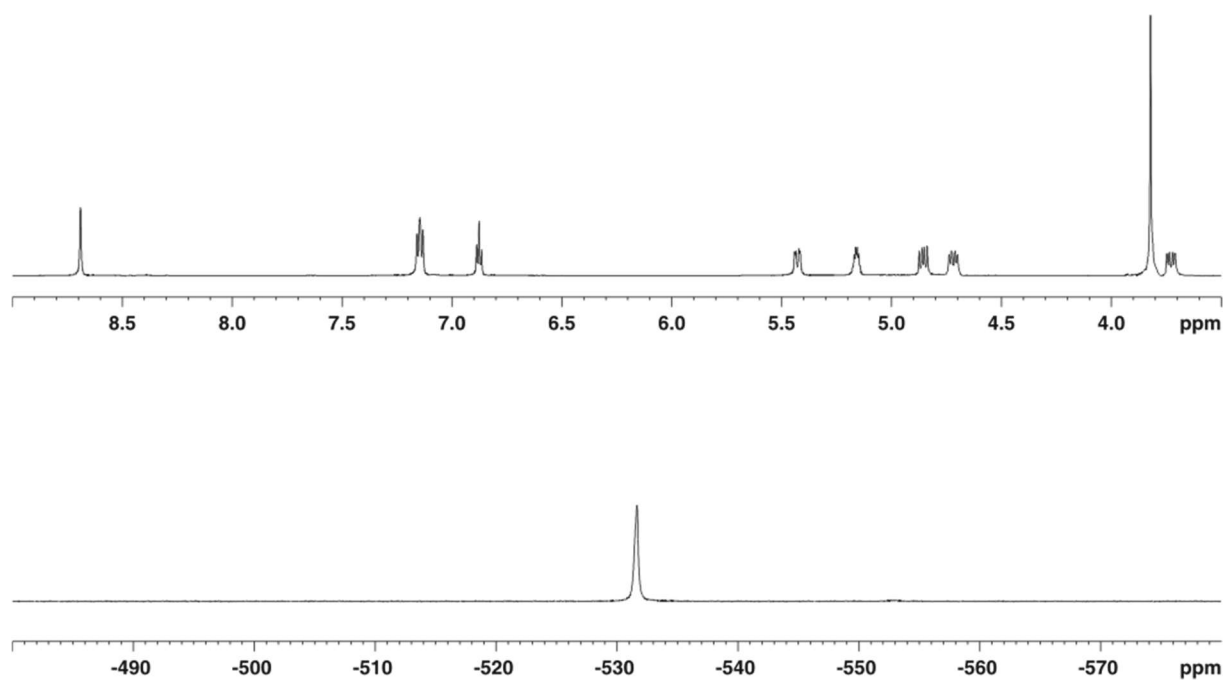
Figure S4. a) ^1H , ^{51}V , COSY and NOESY NMR spectra of the **[(+) VOL^4]** complex.



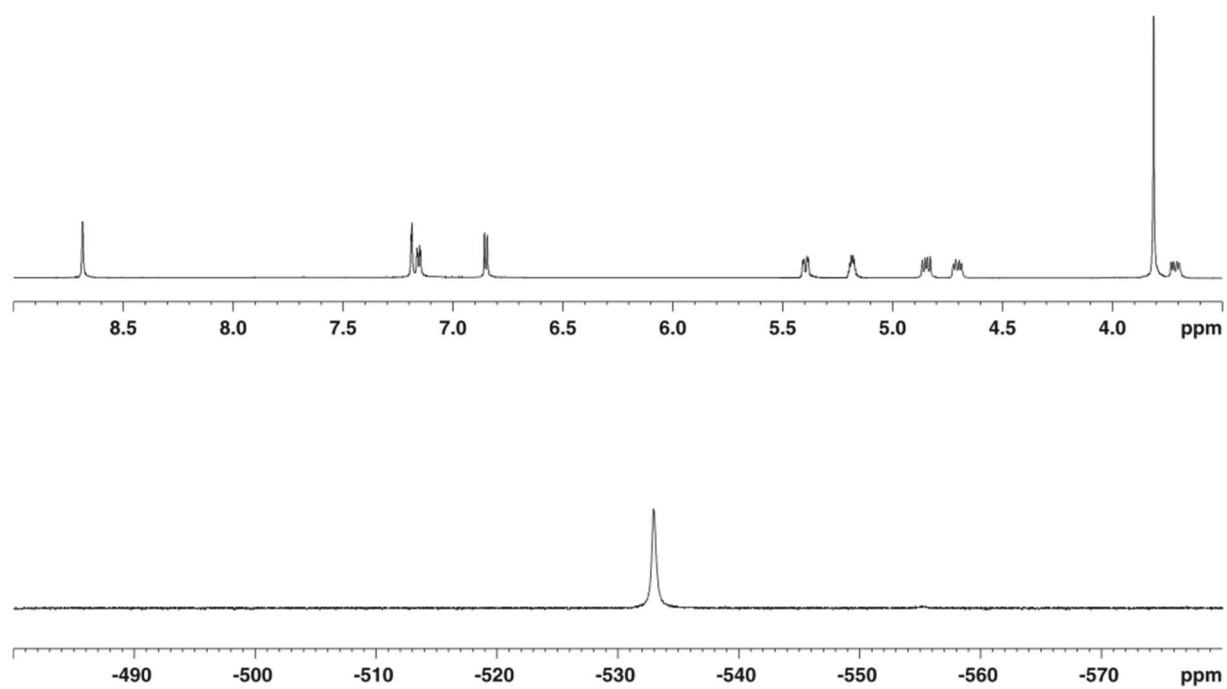


b) ^1H and ^{51}V NMR spectra of the **[(+) VOL^1]**, **[(+) VOL^2]**, **[(+) VOL^3]**, **[(+) VOL^5]** complexes.

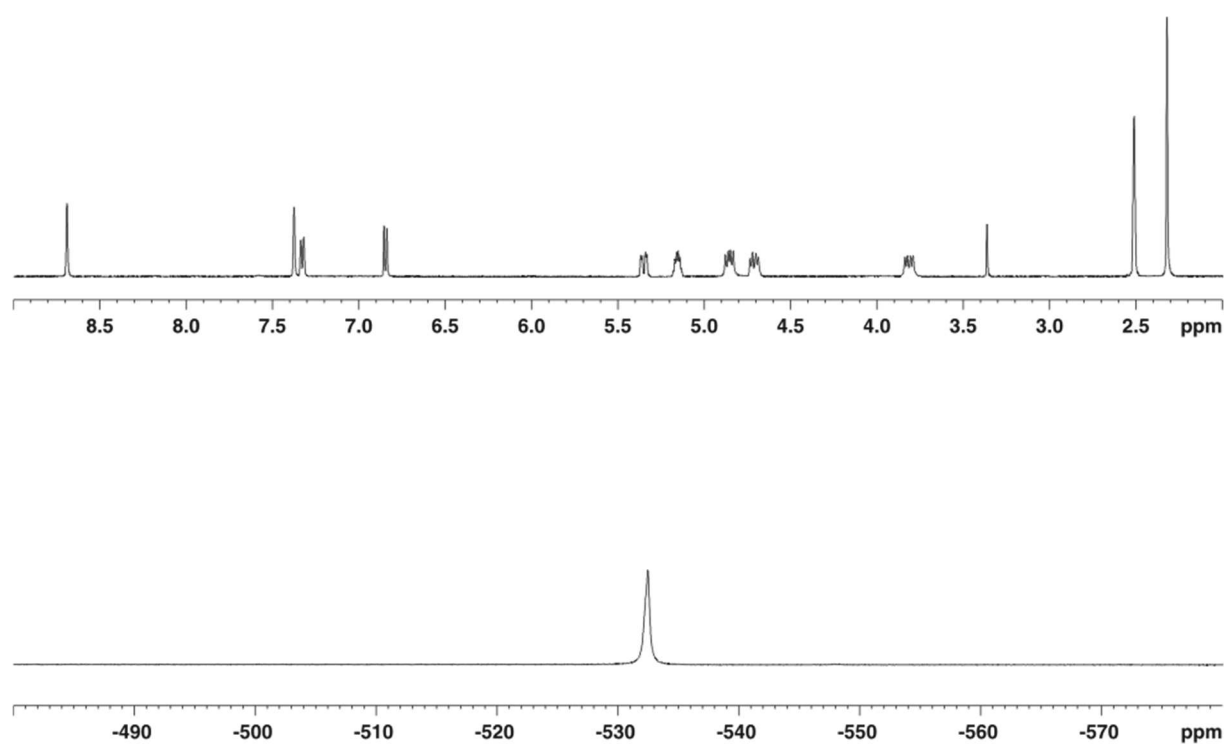
[(+) VOL^1]



[(+) VOL^2]



[(+) VOL^3]



[(+) VOL^5]

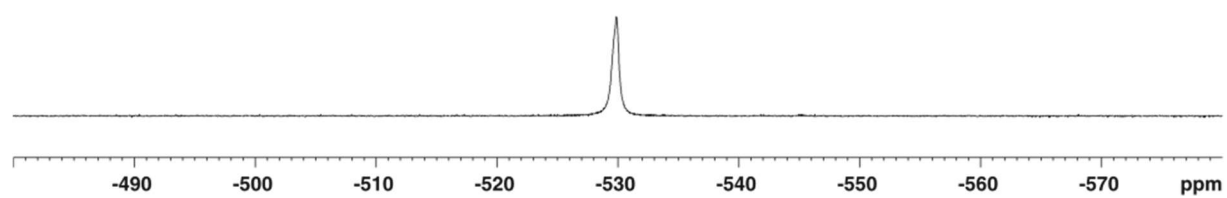
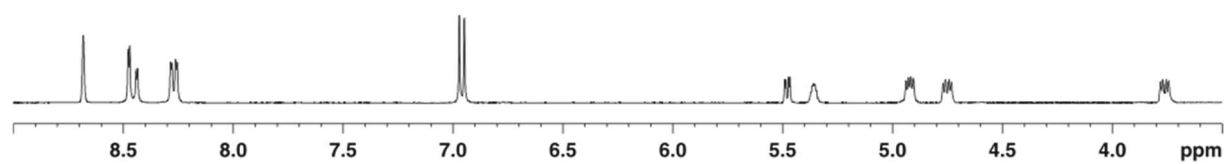


Figure S5. Images of a) [(+)**VOL**⁴] and b) [(-)**VOL**⁴] compounds.

a)



b)

