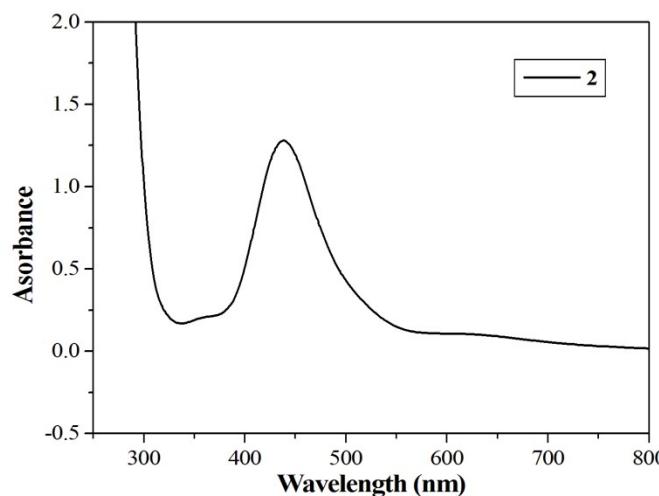


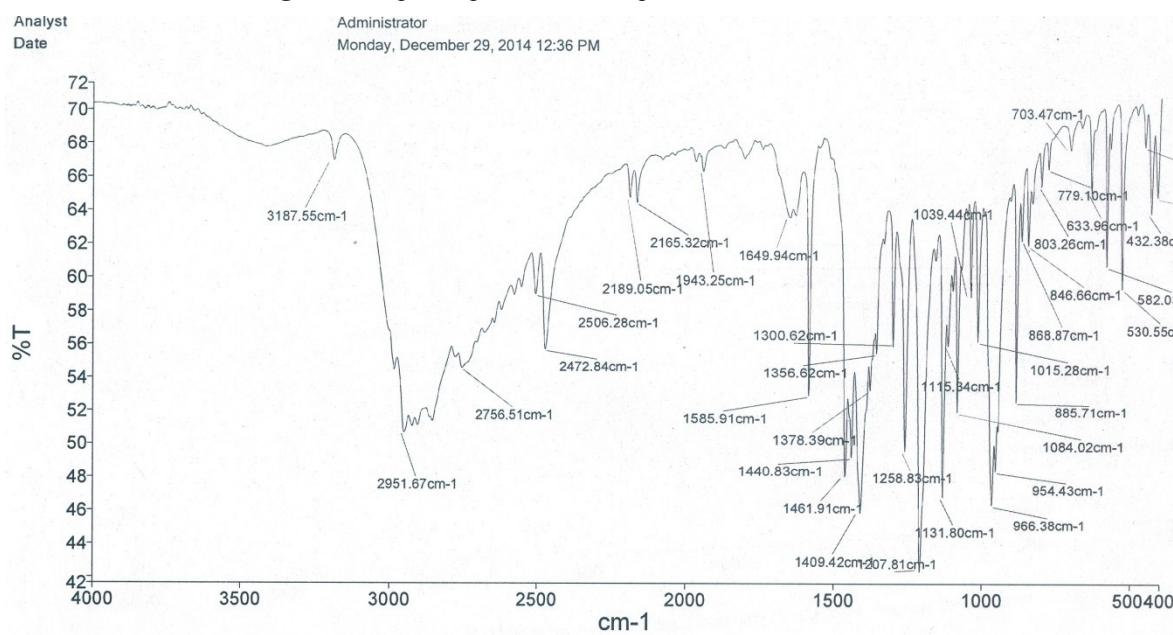
## Ag(I), Cu(II), Co(III), Hg(II) complexes and metal assisted products derived from 4-methyl-piperidine-carbodithioate: Syntheses, structures, redox behaviour, thermal analyses and fluorescence properties

Paras Nath, M. K. Bharty, B. Maiti, A. Bharti, R. J. Butcher, J. L. Wikaira and N. K. Singh

### SUPPLEMENTARY FIGURES

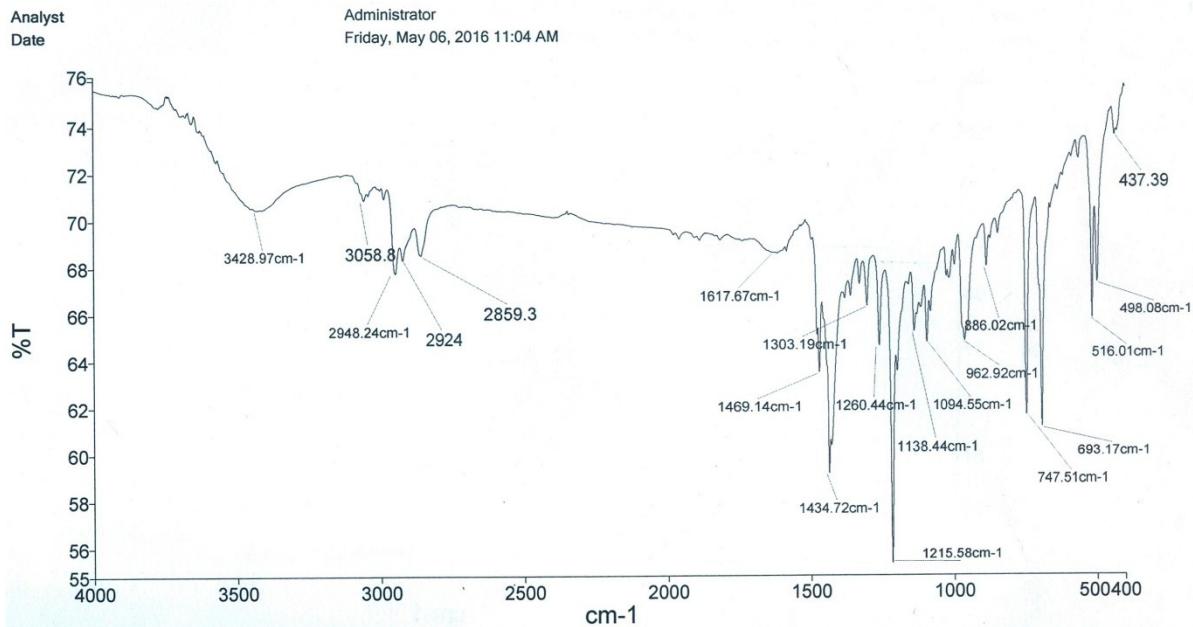


**S.Fig. 1.** Absorption spectrum of complex 2 at  $5 \times 10^{-4}$  M in methanol

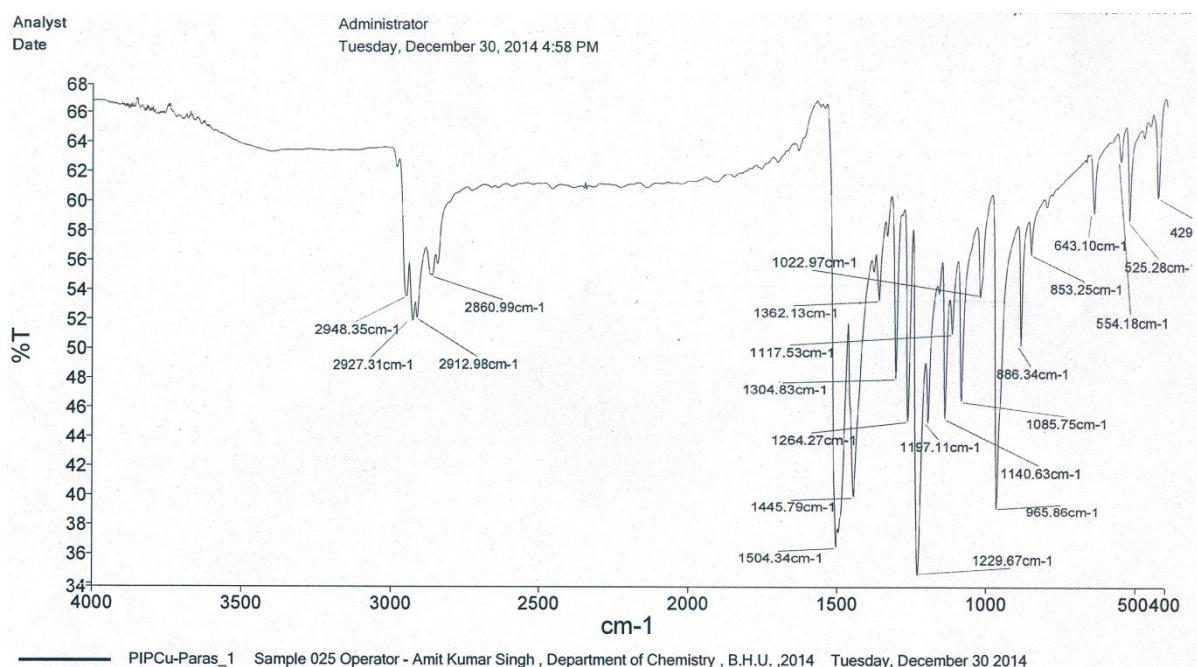


PIPK-Paras\_1 Sample 021 Operator - Amit Kumar Singh , Department of Chemistry , B.H.U. ,2014 Friday, December 26 2014

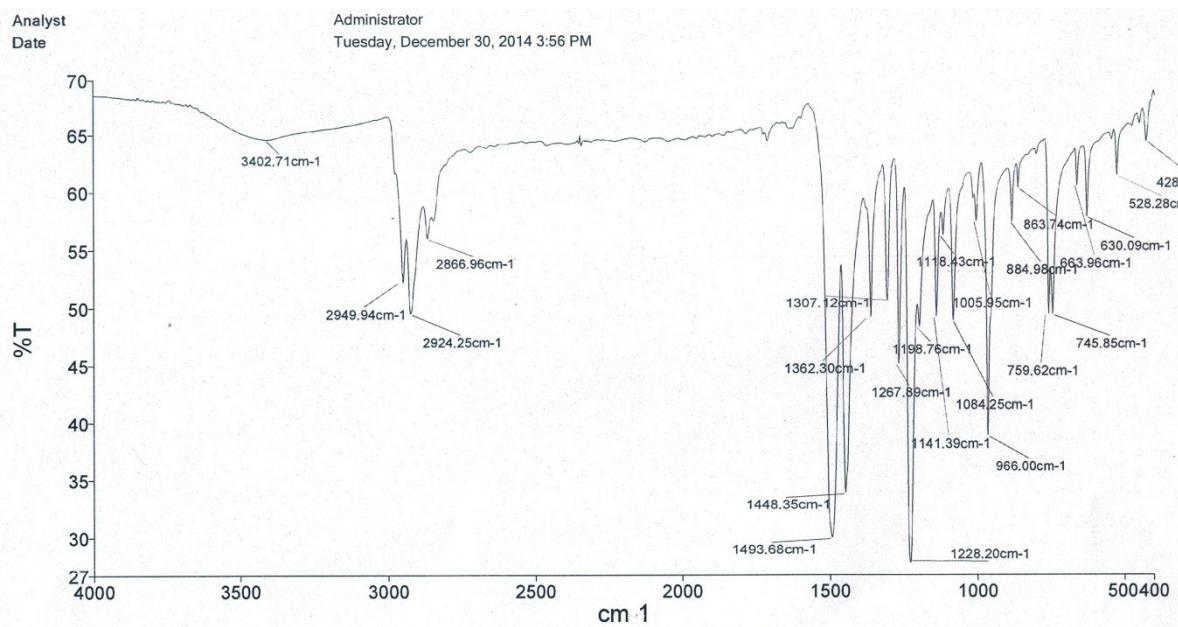
**S.Fig. 2.** IR spectrum of ligand  $\{K^+(4\text{-mpipdtc})^-\}$



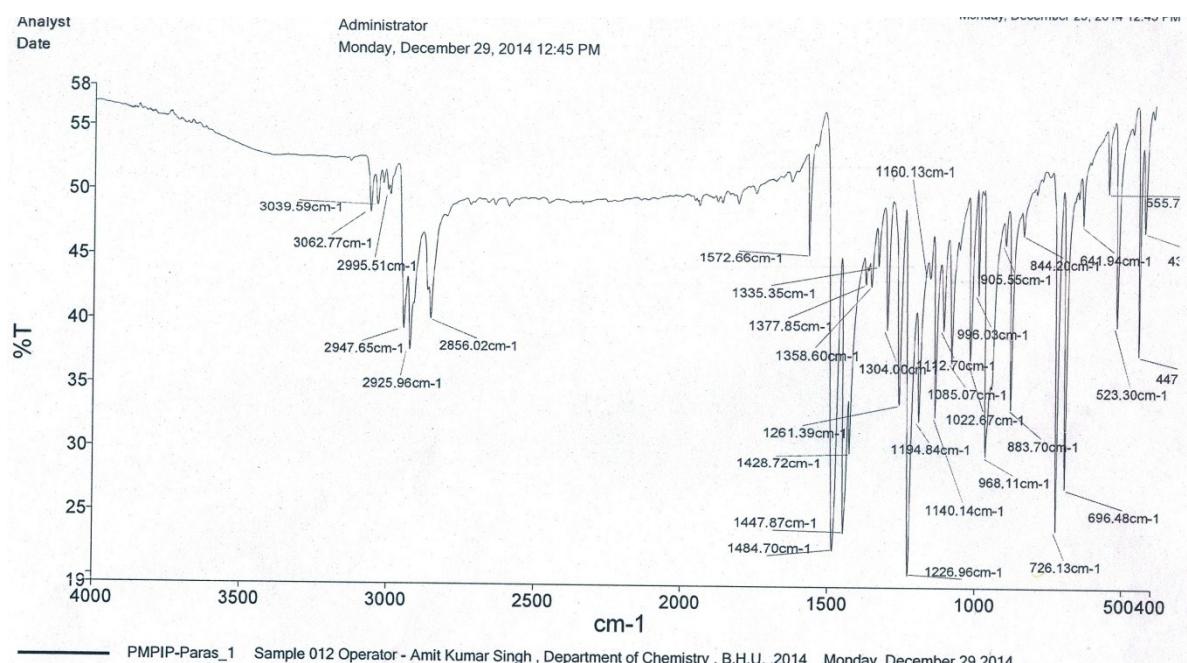
**S.Fig. 3.** IR spectrum of complex  $[\text{Ag}_2(4\text{-mpipdtc})_2(\text{PPh}_3)_2]$  (1)



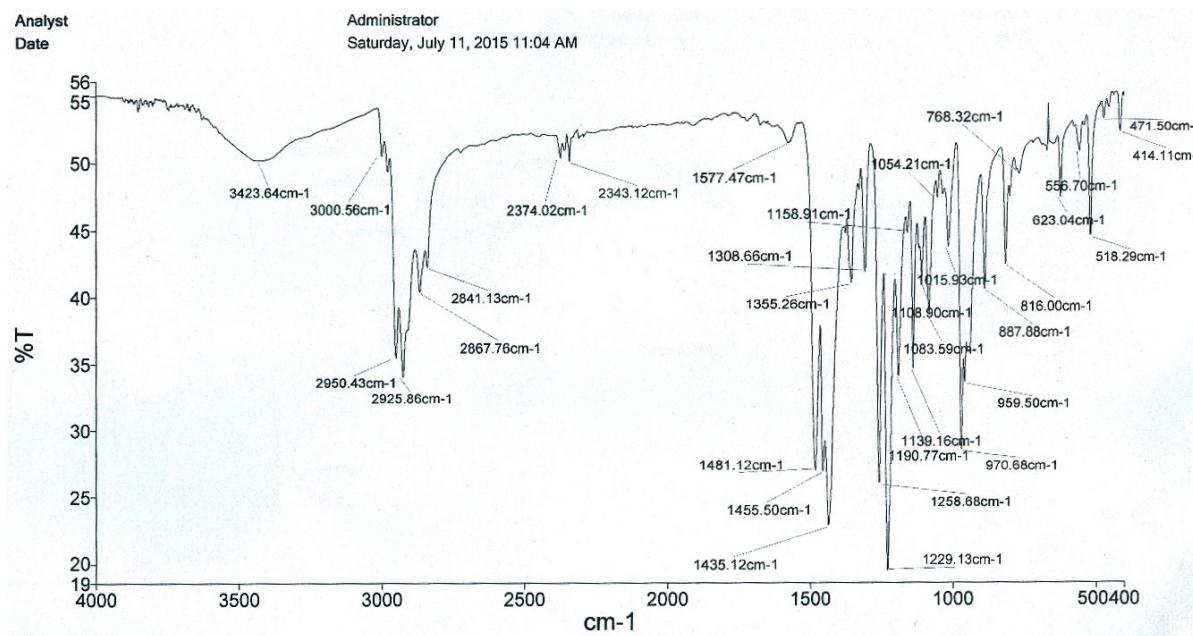
**S.Fig. 4.** IR spectrum of complex  $[\text{Cu}(4\text{-mpipdtc})_2]$  (2)



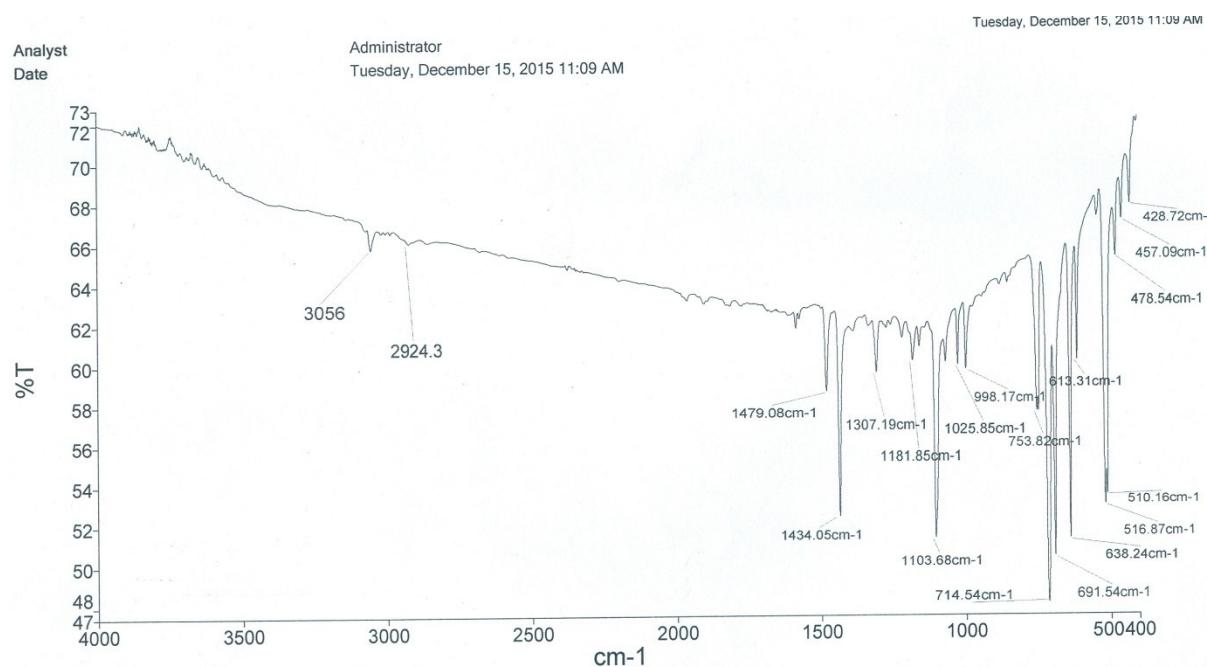
**S.Fig. 5.** IR spectrum of complex  $[\text{Co}(4\text{-mpipdtc})_3]\cdot\text{CHCl}_3$  (3)



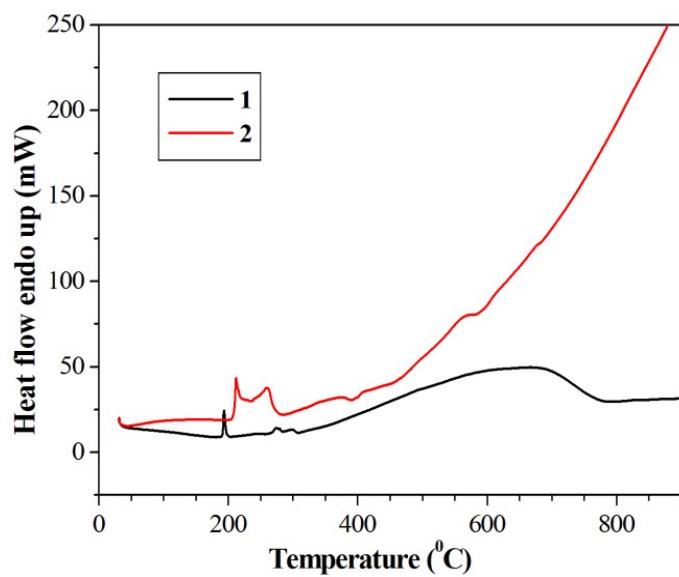
**S.Fig. 6.** IR spectrum of complex  $[\text{PhHg}(4\text{-mpipdtc})]$  (4)



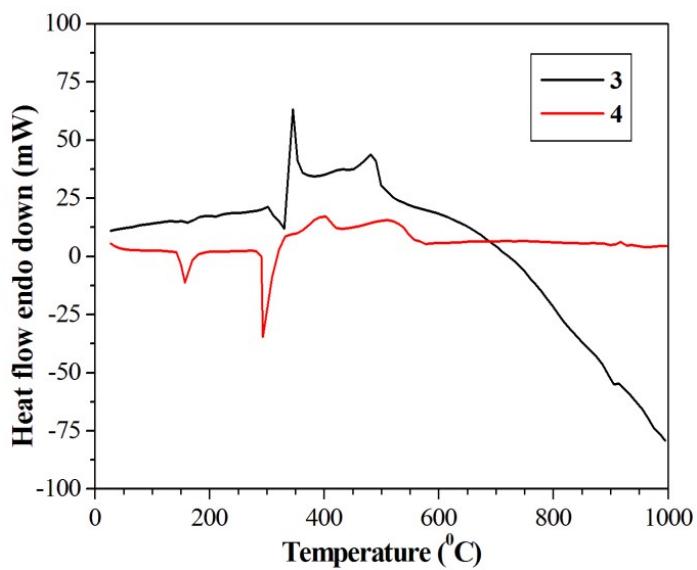
**S.Fig. 7.** IR spectrum of compound  $\{(4\text{-mpipdtc})_2\}$  (**5**)



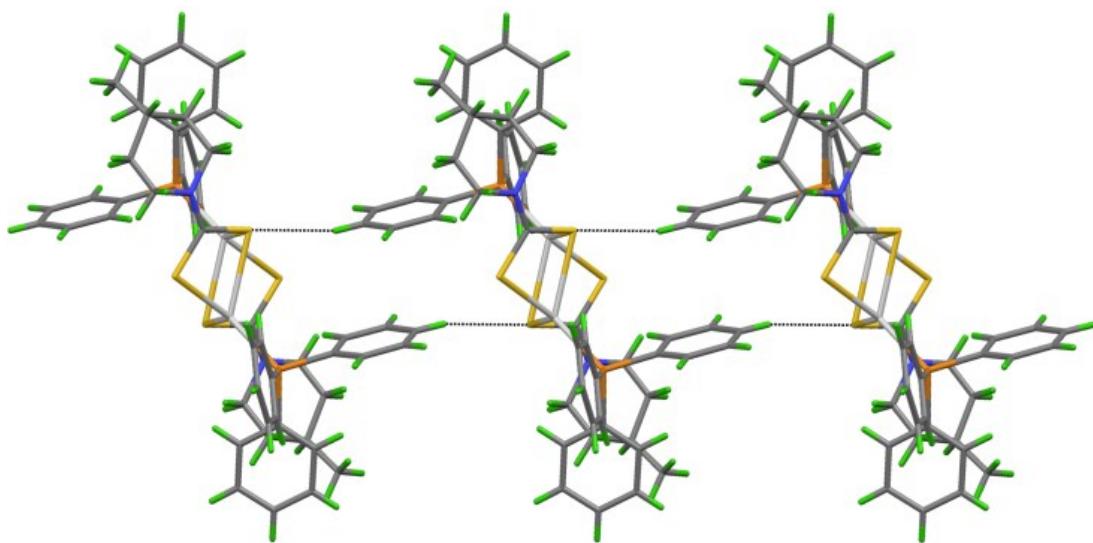
**S.Fig. 8.** IR spectrum of compound  $\text{CH}_2(4\text{-mpipdtc})_2$  (**6**)



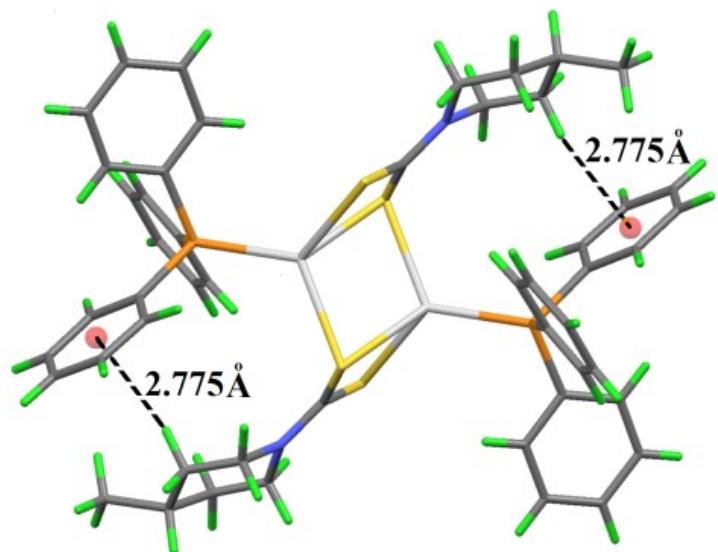
**S.Fig. 9.** DTA curves showing endothermic/exothermic peaks of complexes **1** and **2**



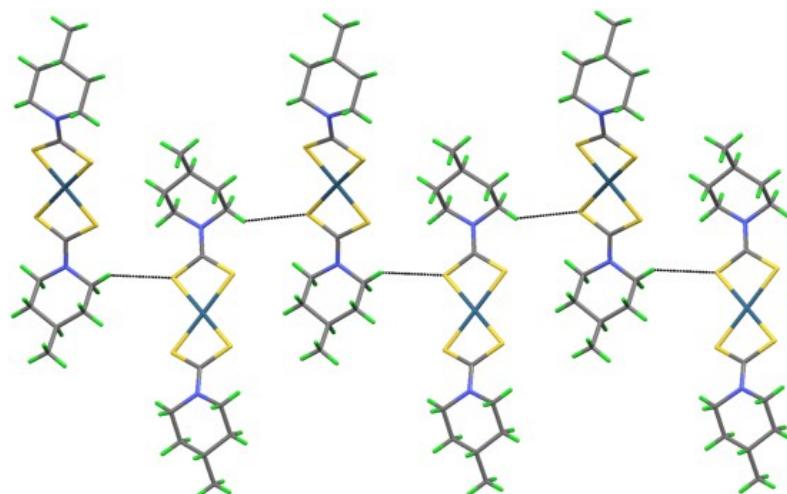
**S.Fig. 10.** DTA curves showing endothermic/exothermic peaks of complexes **3** and **4**



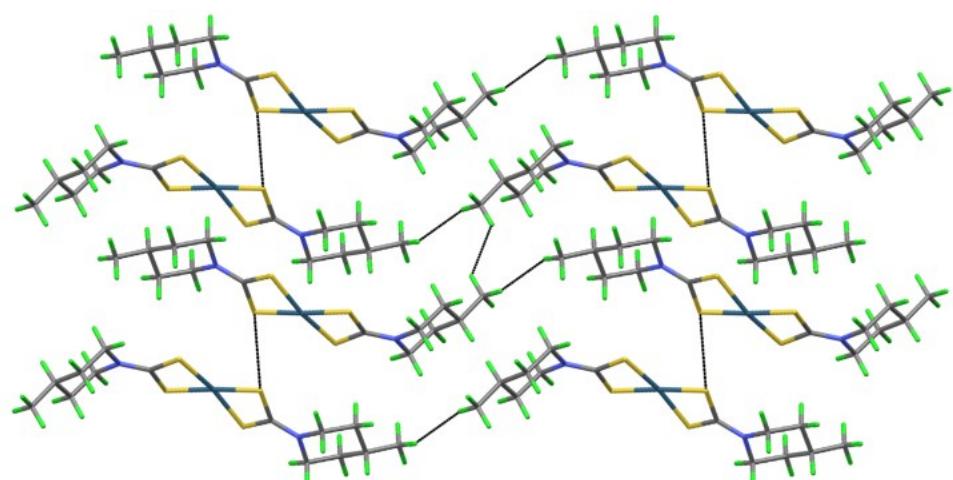
**S.Fig. 11.** C-H···S interactions between dithio sulfur and C-H hydrogen of the phenyl ring in complex **1**



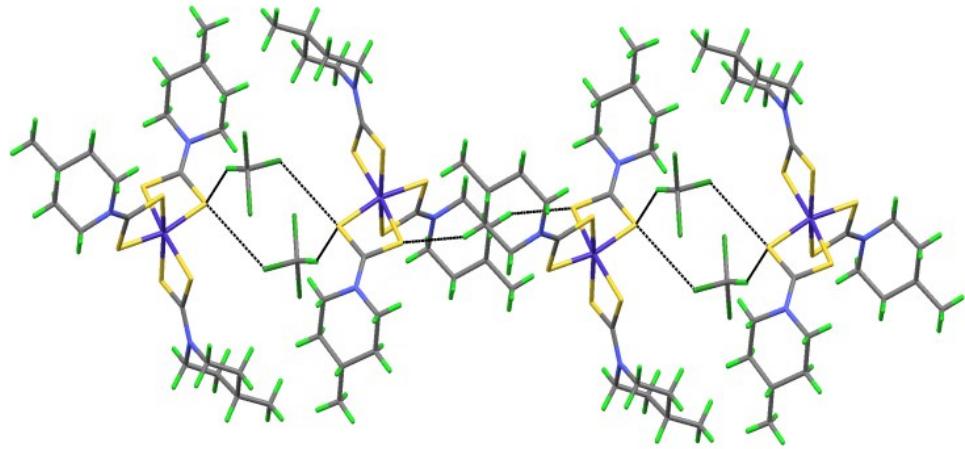
S.Fig. 12.  $\text{C}-\text{H}\cdots\pi$  interactions between  $\text{C}-\text{H}$  of piperidine ring and  $\pi$  electrons of a phenyl ring of  $\text{PPh}_3$  in complex 1



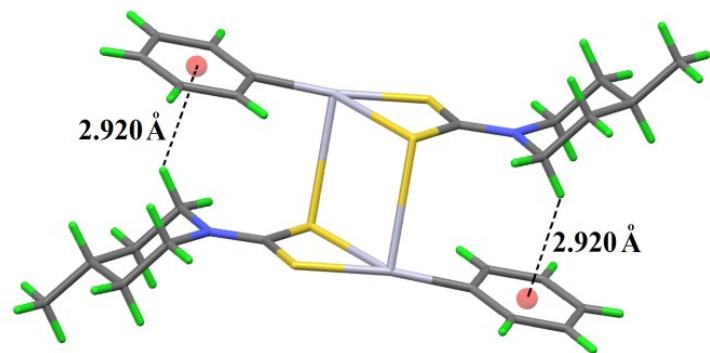
S.Fig. 13.  $\text{C}-\text{H}\cdots\text{S}$  interactions between the dithio sulfur atom and  $\text{C}-\text{H}$  hydrogen of piperidine ring in complex 2



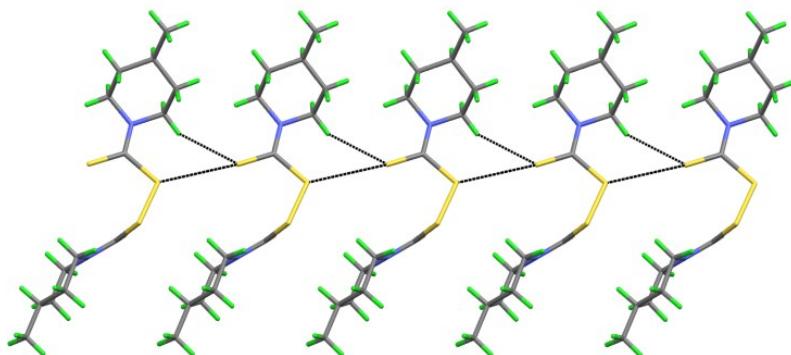
S.Fig. 14.  $\text{S}\cdots\text{S}$  interactions in complex 2 leading a wave like architecture



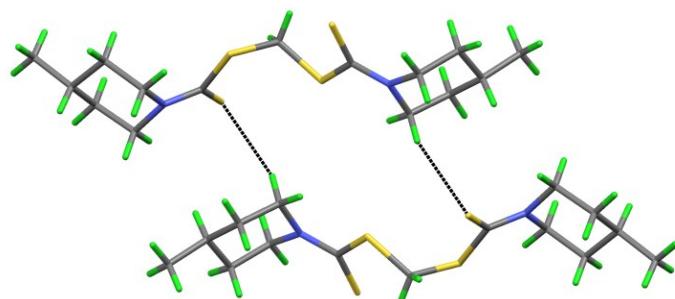
**S.Fig. 15.** C-H···S interactions between dithio sulfur atoms and the hydrogen atoms of the piperidine ring/ hydrogen atoms of chloroform molecules in complex 3



**S.Fig. 16.** C-H···π interactions between C-H of piperidine and  $\pi$  electrons of a phenyl rings in complex 4



**S.Fig. 17.** C-H···S interaction between thione sulfur and C-H of piperidine ring and S···S interactions in compound 5 leading to a linear chain architecture



**S.Fig. 18.** C-H···S interaction between hydrogen of piperidine ring and dithiocarbamate sulfur in compound 6