

## Coordinative Trends of a Tridentate Thiosemicarbazone Ligand: Synthesis, Characterization, Luminescence Studies and Desulfurization Processes

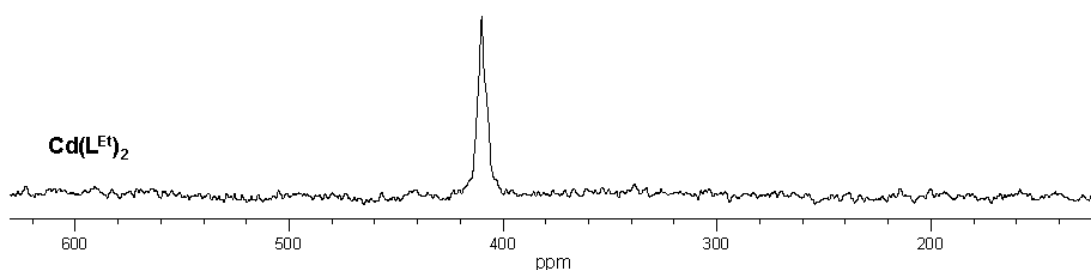
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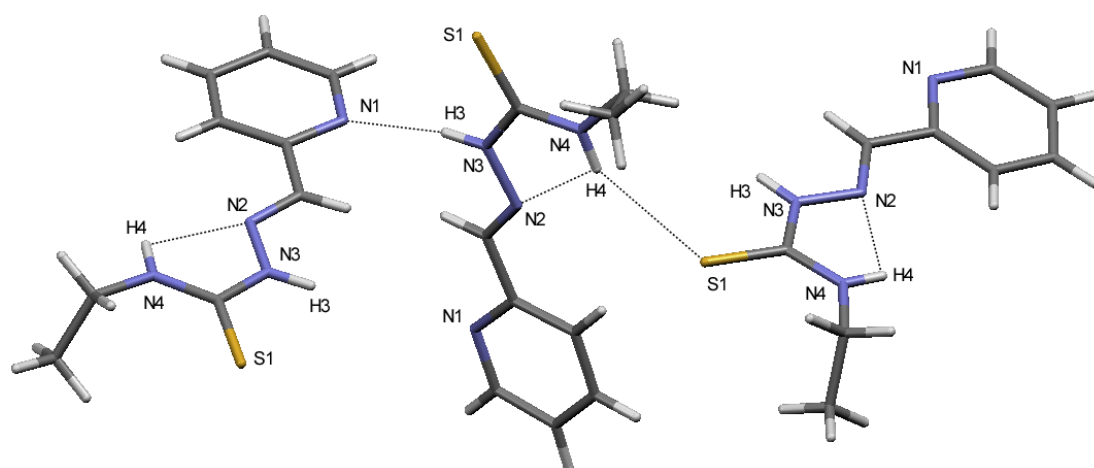
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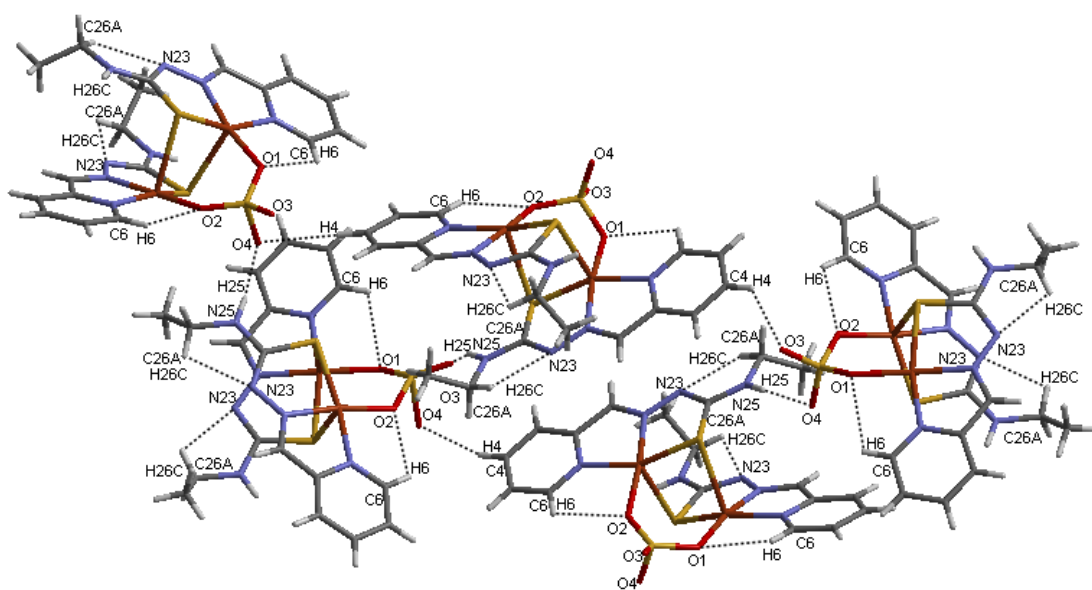
### Electronic supplementary information



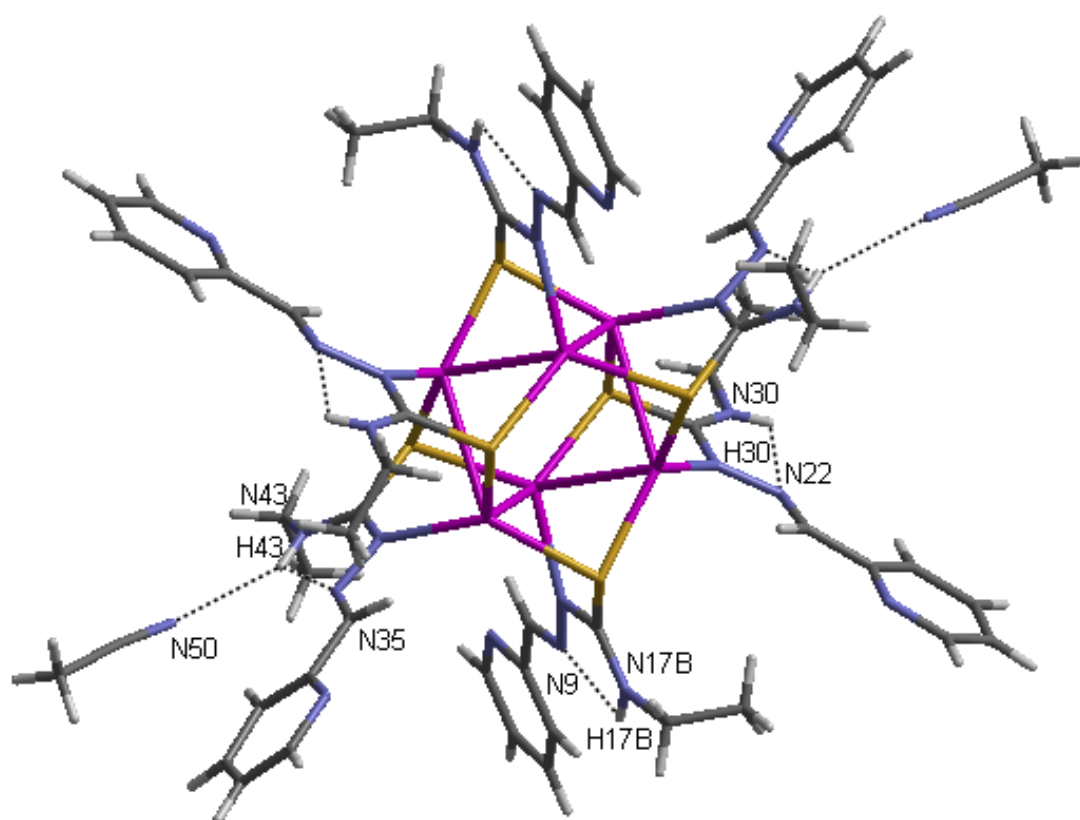
**Figure S1.** <sup>113</sup>Cd NMR spectrum of Cd(L<sup>Et</sup>)<sub>2</sub> (**11**)



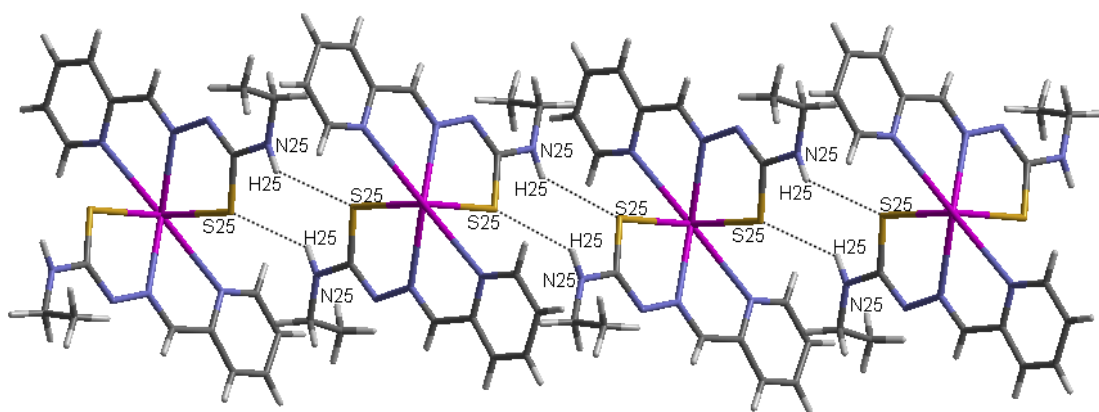
**Figure S2.** Detail of the 1D structure originated by the establishment of intramolecular and intermolecular hydrogen bond interactions in the ligand  $HL^{Et}$ .



**Figure S3.** Hydrogen bond interactions in the complex  $[\text{Cu}_2(\text{L}^{\text{Et}})_2(\text{SO}_4)] \cdot 7$



**Figure S4.** Hydrogen bond interactions in the complex  $[Ag_6(L^{Et})_6] \cdot CH_3CN$  **9**



**Figure S5.** Hydrogen bond interactions in the complex [Pb(L<sup>Et</sup>)<sub>2</sub>] 12