

ELECTRONIC SUPPLEMENTARY MATERIAL

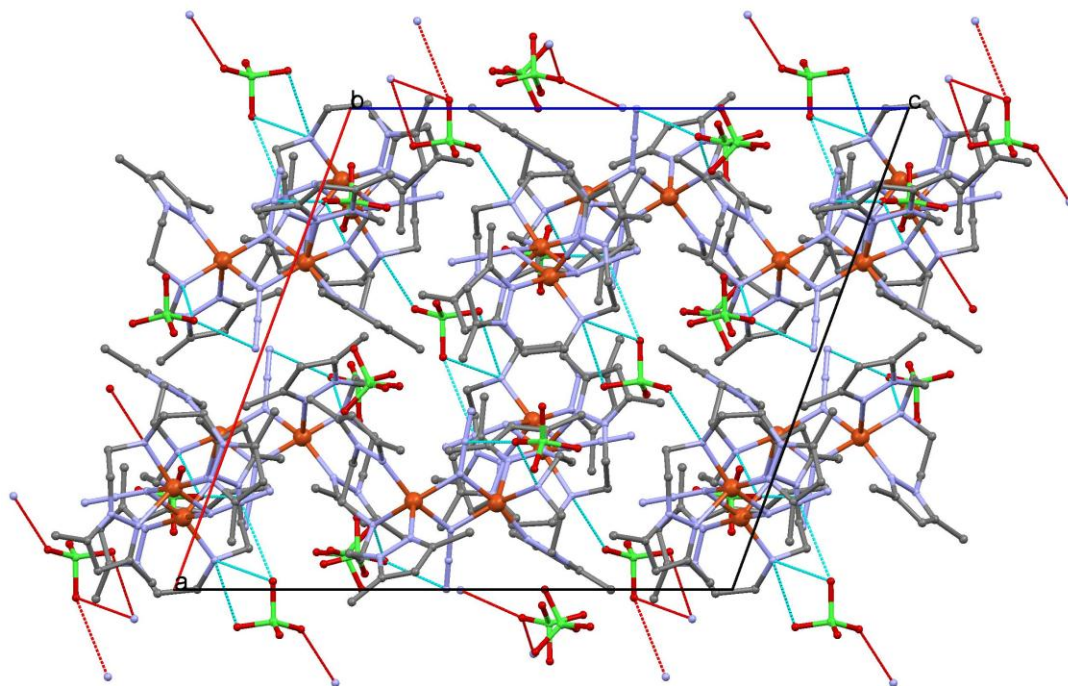


Figure S1: Packing plot of [Cu(bedmpza)(μ1,1-N₃)]₂(ClO₄)₂ (1)

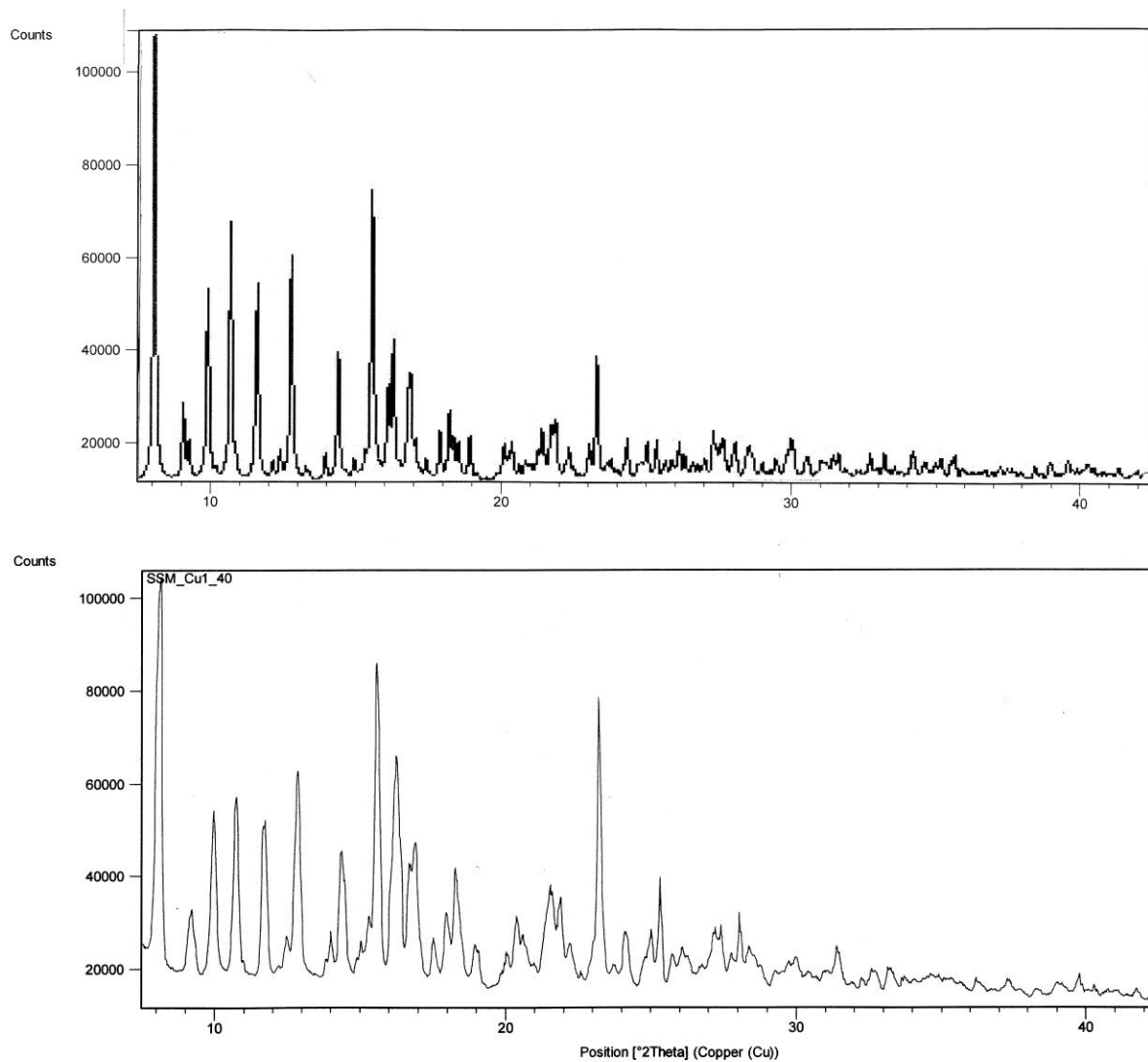


Figure S2. Top: XRD pattern of compound **1**: calculated from single crystal data at 100 K.
bottom: experimental XRD pattern at RT of the same amount of powder sample of compound **1** as used for the magnetic measurements [Bruker D8 Advance diffractometer, profile fit: Cu-K α -radiation, range 7.500 – 60.000° (2 Θ), step size: 0.020° (2 Θ), 13 variables, $R_{(\text{Bragg})} = 4.08\%$, $R_{(\text{profile})} = 4.68\%$].

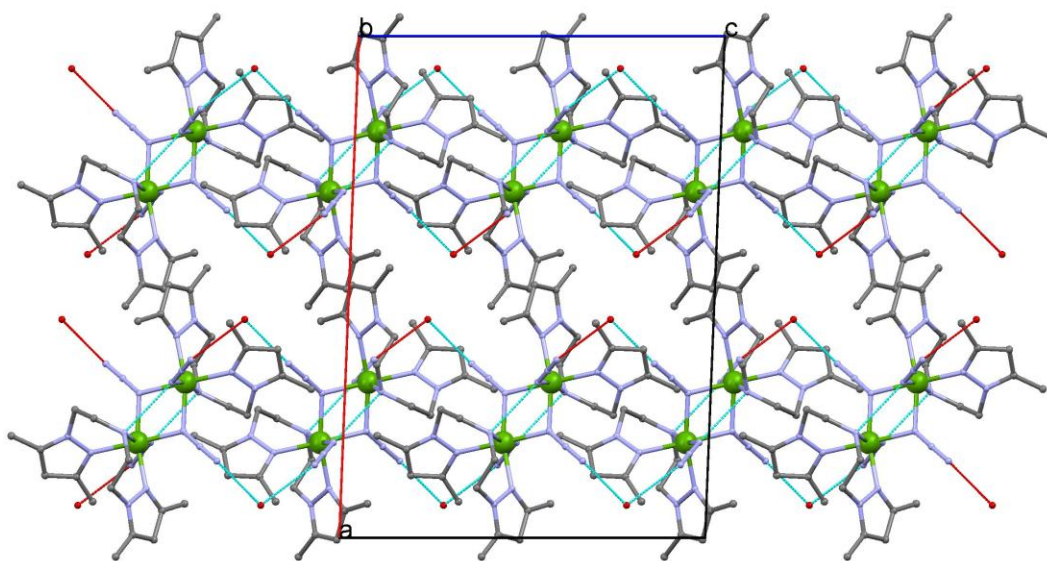


Figure S3: Packing plot of $[\text{Ni}(\text{bedmpza})(\mu 1,1\text{-N}_3)(\text{N}_3)]_2 \cdot 1.5\text{H}_2\text{O}$ (**2**).

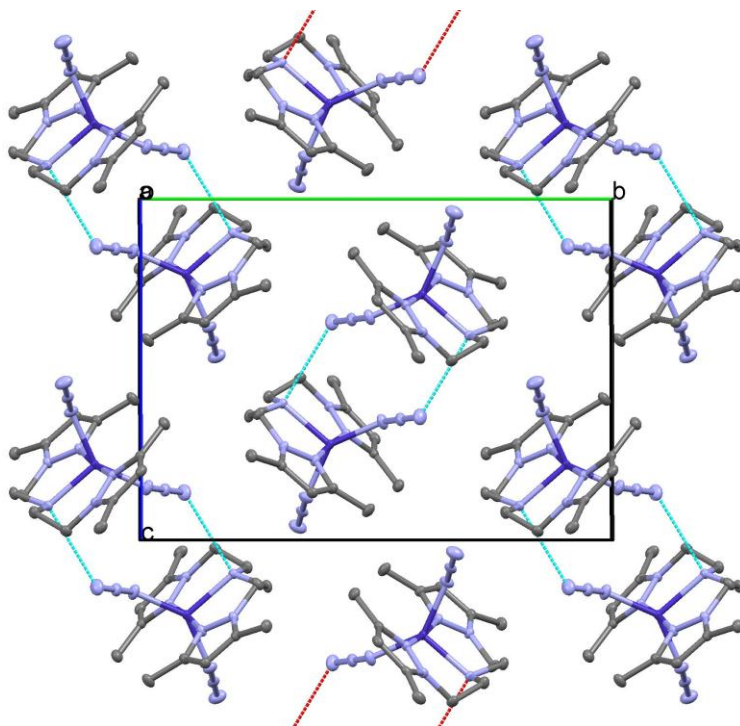


Figure S4: Packing plot of $[\text{Co}(\text{bedmpza})(\text{N}_3)_2]$ (**3**).

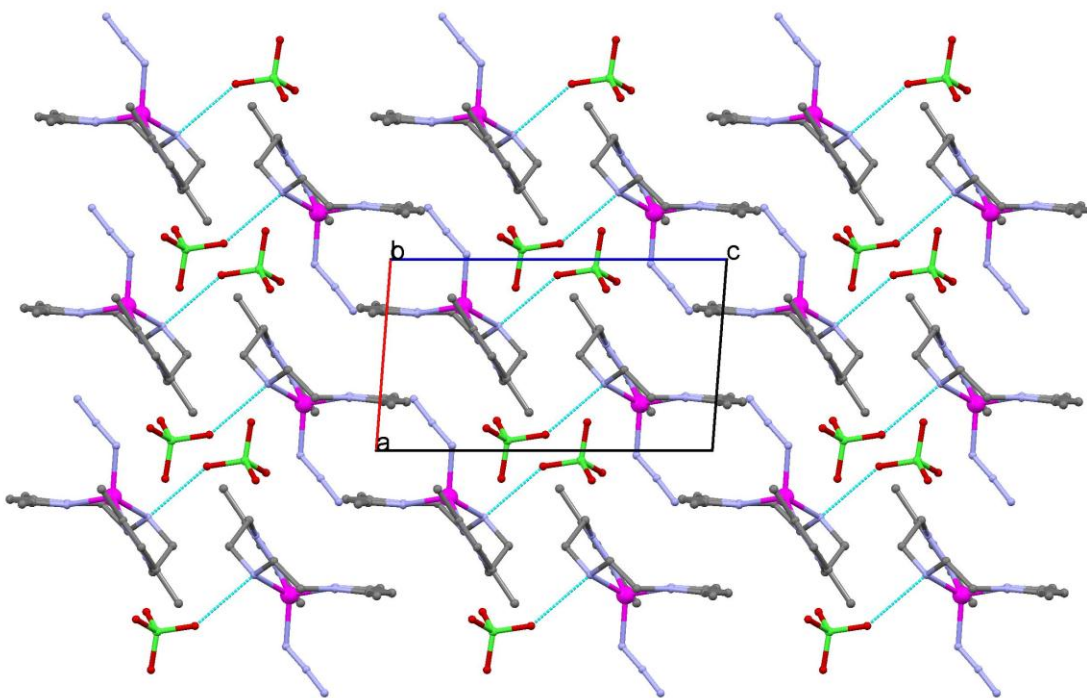


Figure S5. Packing plot of [Zn(bedmpza)(N₃)]ClO₄ (**4**).

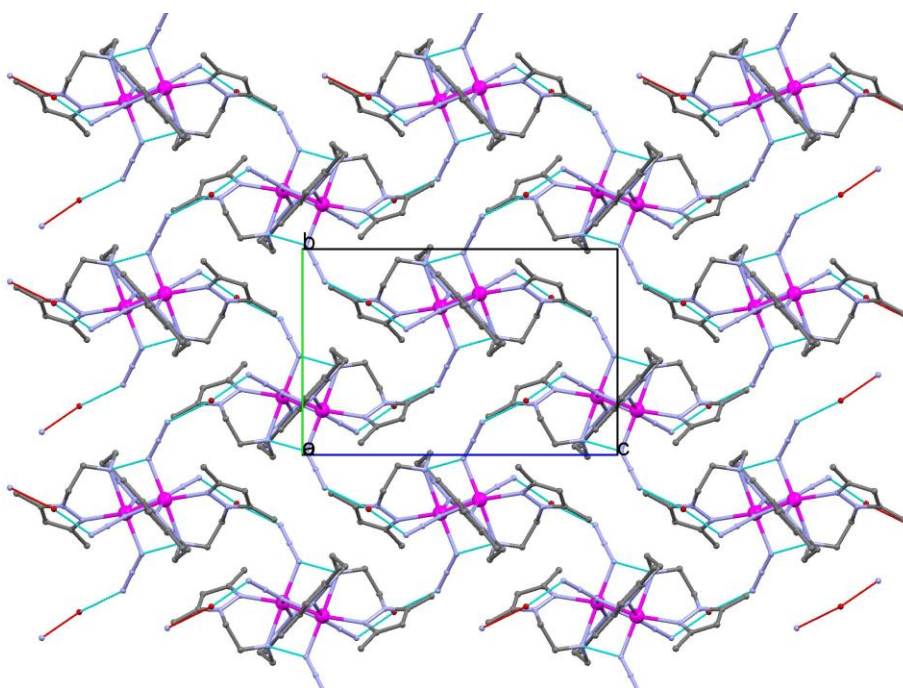


Figure S6. Packing plot of [Cd(bedmpza)(μ_{1,1}-N₃)(N₃)]₂·1.5H₂O (**5**).

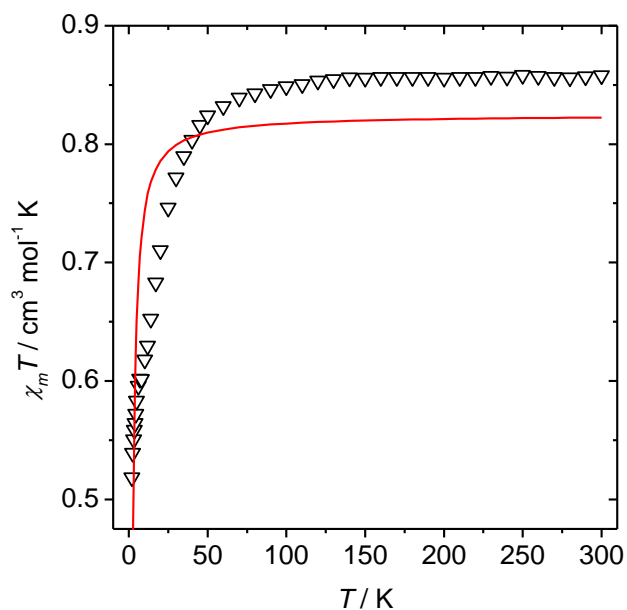


Figure S7. Plot of the $\chi_m T$ vs T for complex **1**. Solid line (red color) represents the best fit using the simplest Bleaney-Bowers formula (only one moiety): $J = -2.52 \text{ cm}^{-1}$; $g = 2.10$.

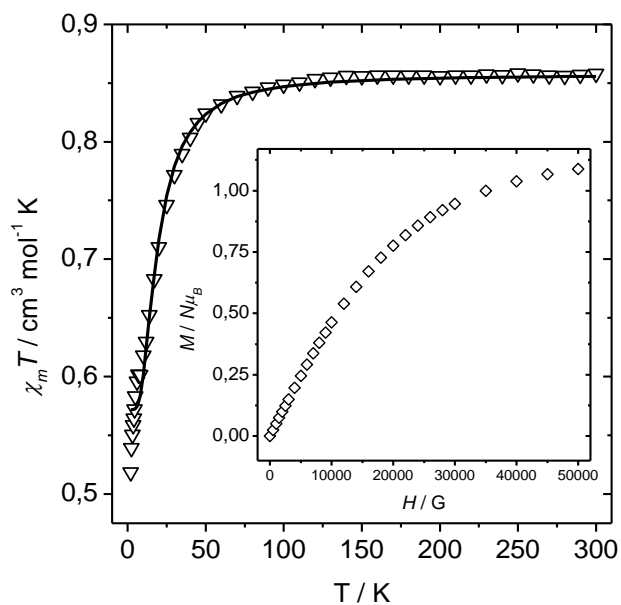


Figure S8. Plot of the $\chi_m T$ vs T for complex **1**. Solid line represents the best fit (see Text). Inset: Plot of the reduced magnetization at 2 K for complex **1**.

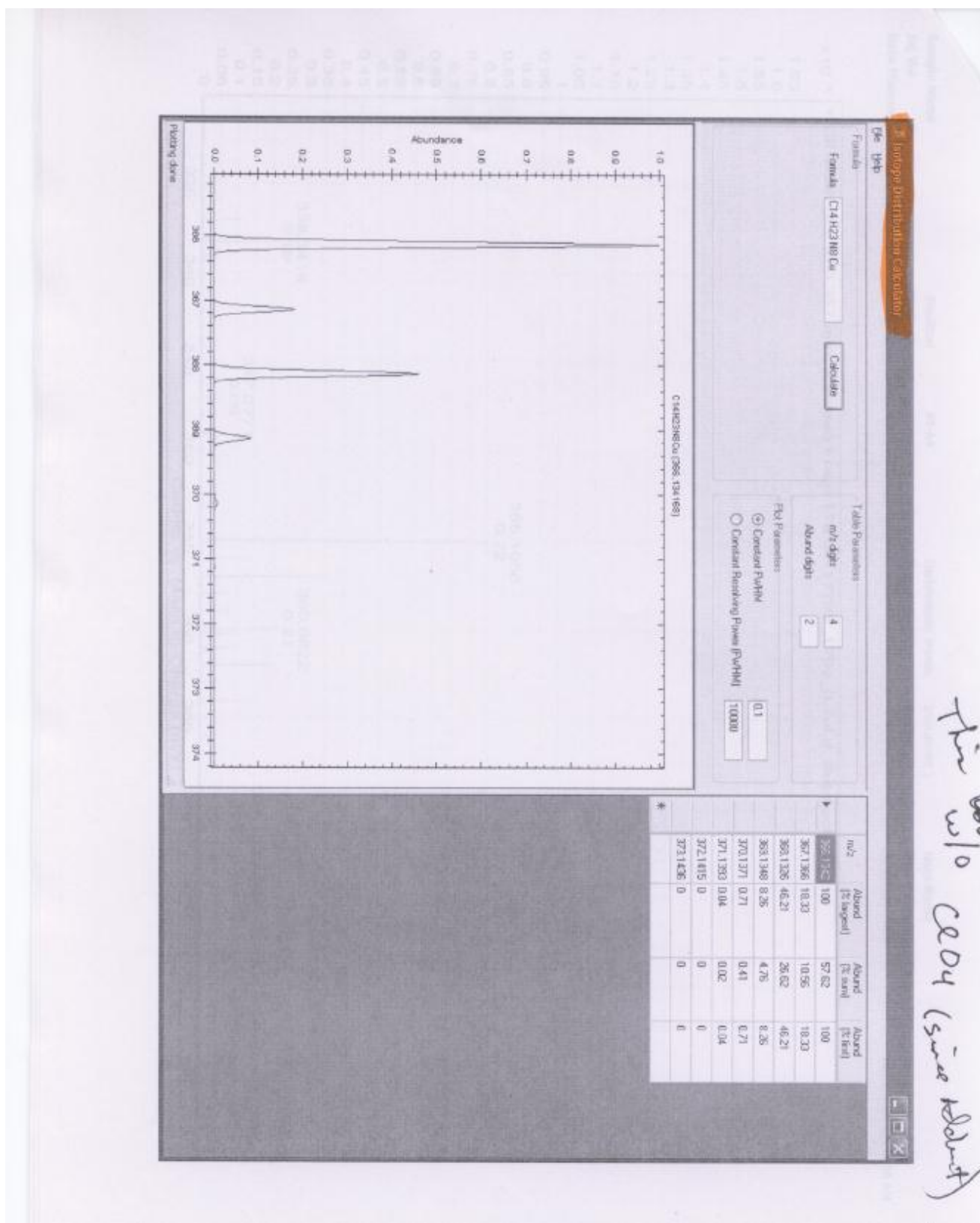


Figure S9. ESI-MS of complex $[\text{Cu}(\text{bedmpza})(\mu_{1,1}\text{-N}_3)]_2(\text{ClO}_4)_2$ (**1**) in MeOH.