

Synthesis, Characterization and Properties of Ternary Copper(II) Complexes of Reduced Schiff Base *N*-(2-Hydroxybenzyl)- α -Amino Acids and 1,10-Phenanthroline

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Electronic Supplementary Information:

Fig. S1. ESI-MS of **1** in MeOH.

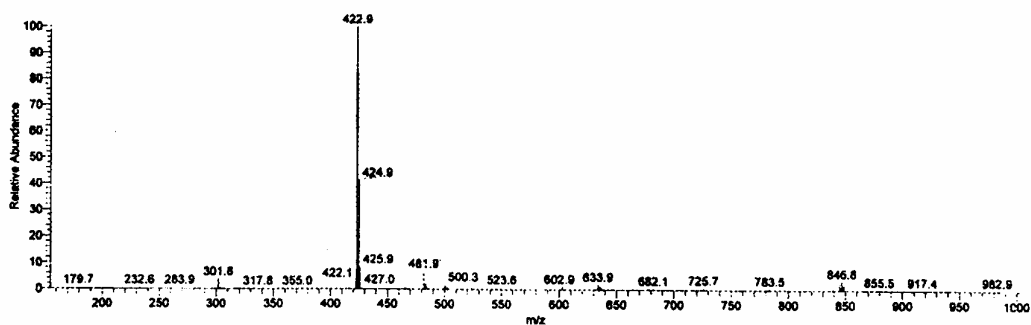


Fig. S2. ESI-MS of **2** in MeOH.

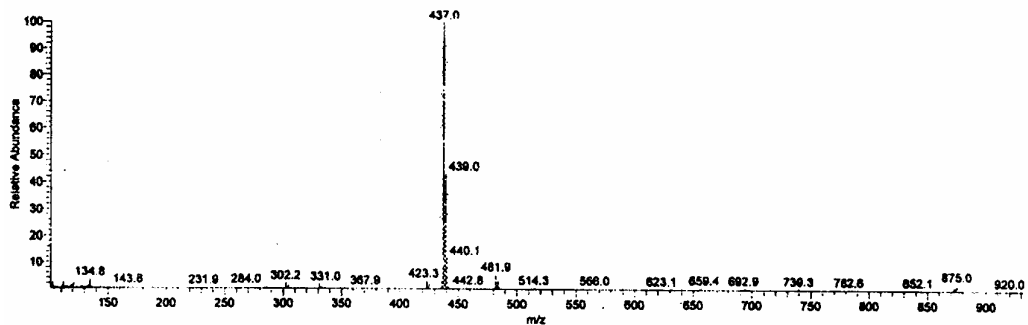


Fig. S3. ESI-MS of 3 in MeOH.

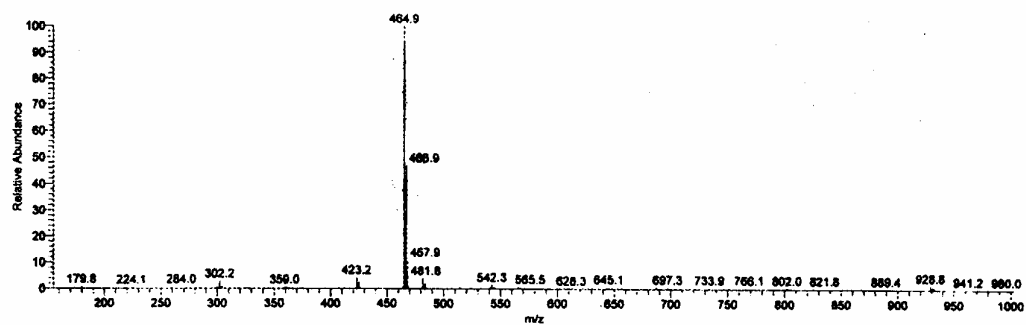


Fig. S4. ESI-MS of 4 in MeOH.

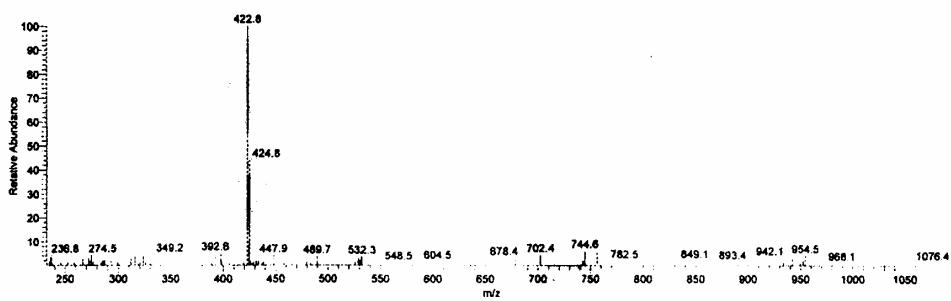


Fig. S5. ESI-MS of 5 in MeOH.

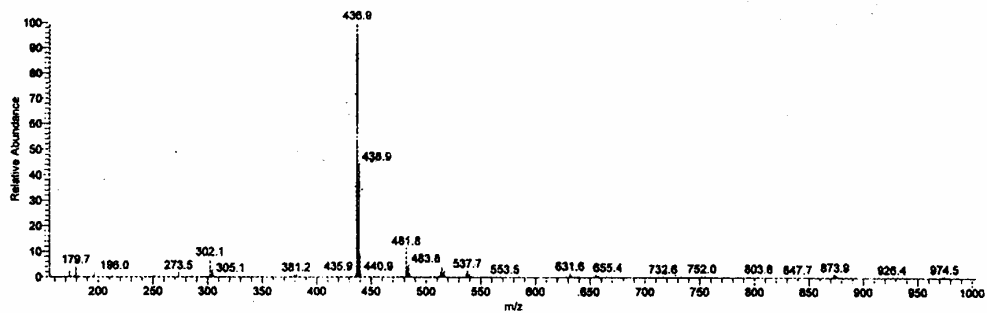
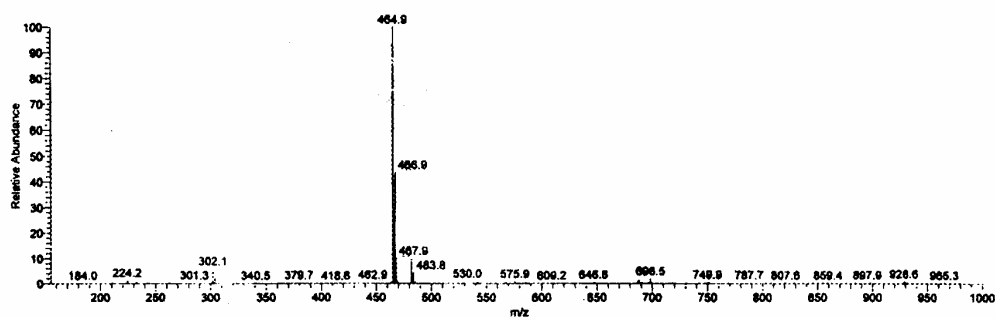


Fig. S6. ESI-MS of 6 in MeOH.



Please Note: The ESI-MS obtained by the addition of equimolar HClO_4 to **1-3** are the same as in Fig. S4-S6. Similarly, the ESI-MS of the products obtained by addition of equimolar HClO_4 to $\text{Cu}(\text{ClO}_4)_2 + \text{H}_2\text{L} + \text{phen} + 2\text{LiOH}$ solution are identical to Fig. S4-S6. Although the neutral and protonated compounds could not be distinguished by ESI-MS, the color of the solution (green, **1-3** and blue, **4-6**) and isolation of the products and subsequent characterization confirmed their identity.

Fig. S7. ESI-MS of 7 in MeOH.

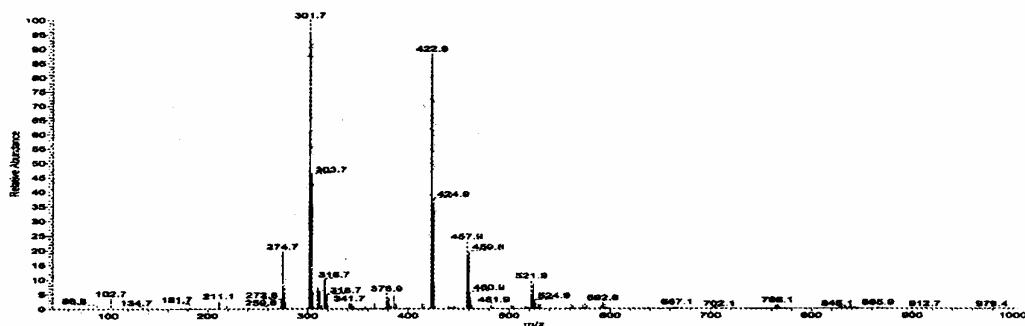


Fig. S8. ESI-MS of **8** in MeOH.

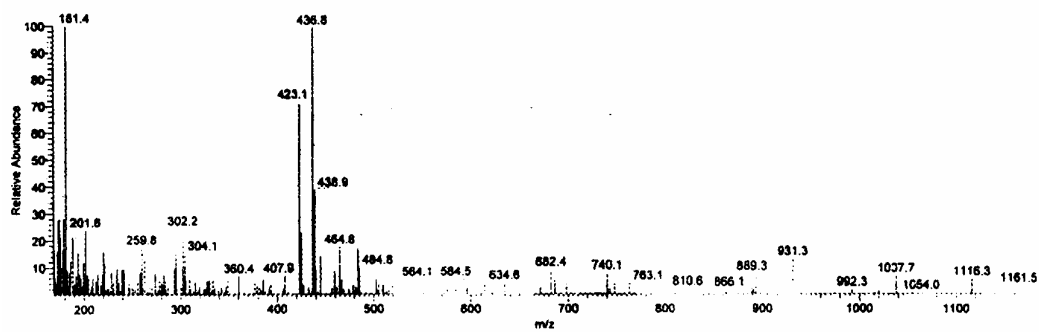


Fig. S9. ESI-MS of **9** in MeOH.

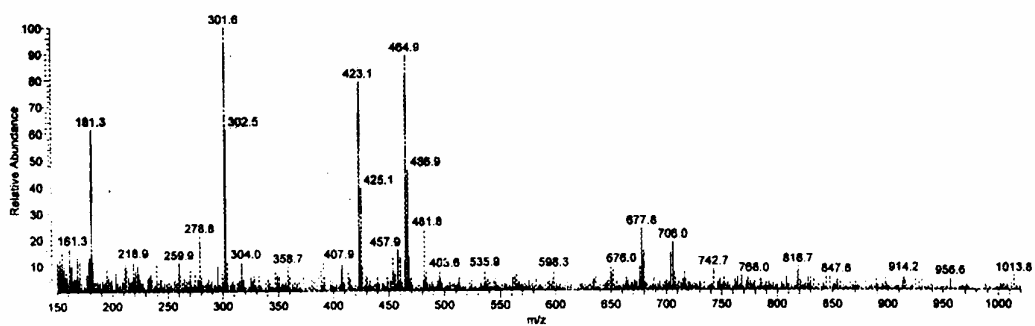


Fig. S10. ESI-MS of solution after addition of equimolar NaOH to **4**.

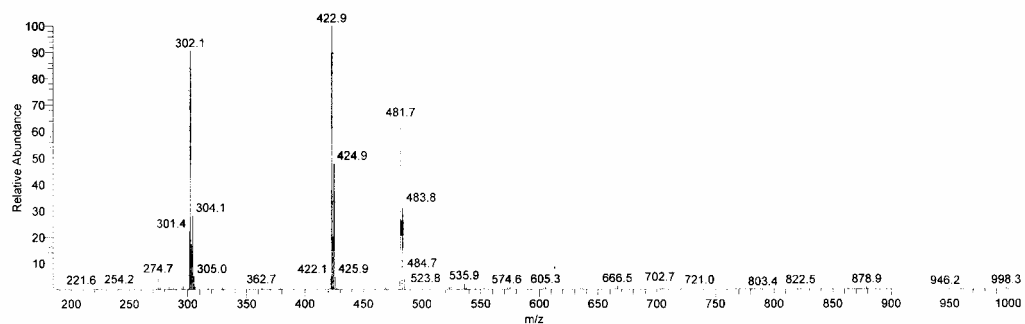


Fig. S11. ESI-MS of solution after addition of equimolar NaOH to **5**.

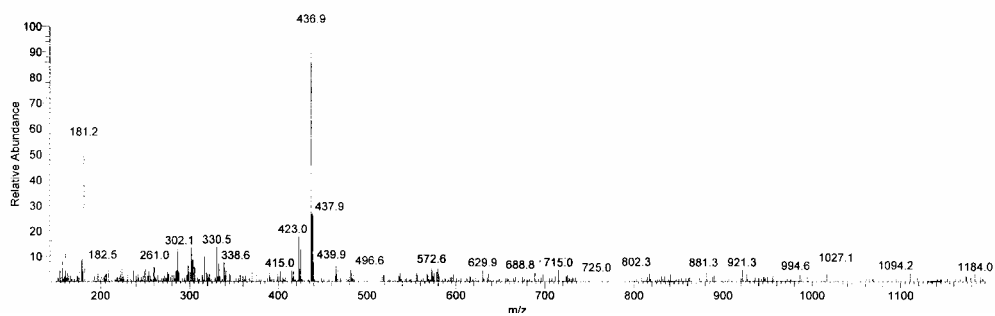


Fig. S12. ESI-MS of solution after addition of equimolar NaOH to **6**.

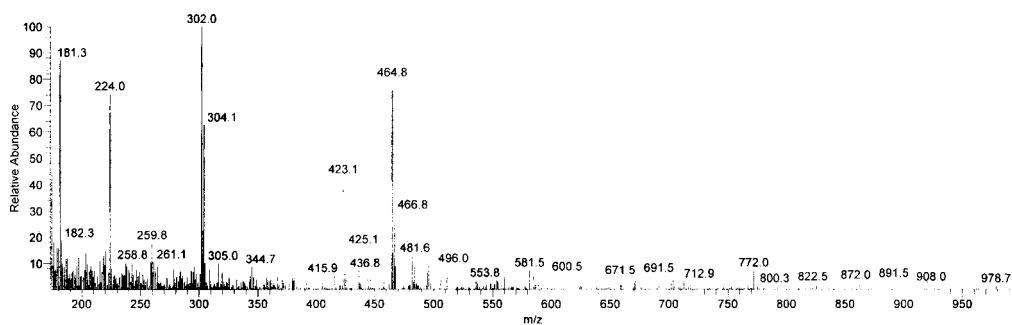
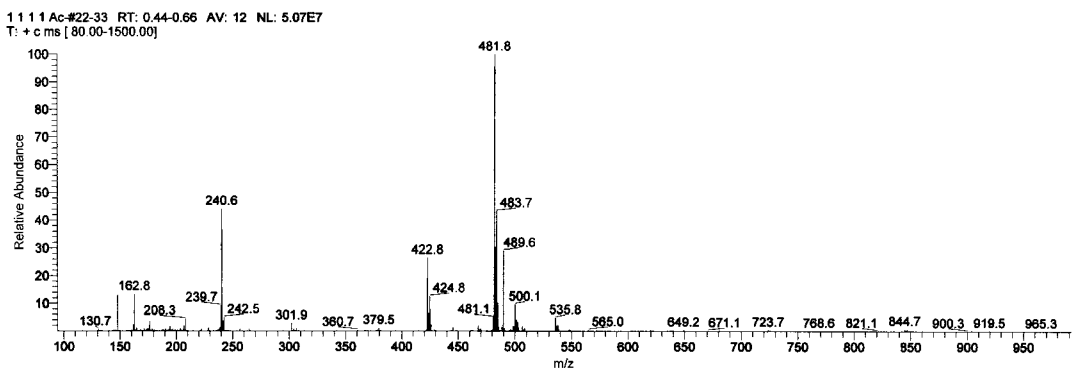


Fig. S13. ESI-MS of solution containing $[\text{Cu}(\text{OAc})_2 + \text{H}_2\text{sgly} + \text{phen} + \text{LiOH}]$ showing the band due to $[\text{Cu}(\text{Hsgly})(\text{phen})(\text{OAc}) + \text{H}^+]$ ($m/z = 481.8$).



Please Note:

- ✓ The ESI-MS of the products obtained from $\text{Cu}(\text{ClO}_4)_2 + \text{H}_2\text{L} + \text{phen} + 2\text{LiOH}$ in MeOH solution are identical to Fig. S10-S12.
- ✓ The ESI-MS of the products obtained by the addition of equimolar NaClO_4 to **1-3** are identical to those obtained by addition equimolar NaOH to **4-6**.
- ✓ The ESI-MS of **1**+ NaOH , **2**+ NaOH and **3**+ NaOH are identical to that of the neutral compounds, **1-3**.

Fig. S14. Variation of UV-vis spectra for the mononuclear **2** by addition of an aqueous HClO_4 indicate the formation of **5**.

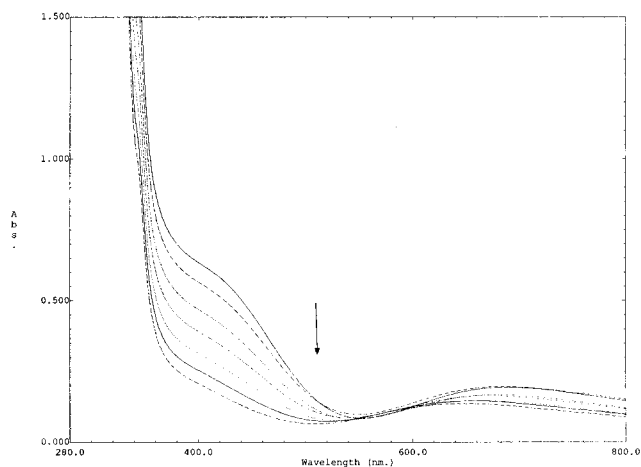


Fig. S15. UV-vis spectra of **2** (——) and Mixture of $[\text{Cu}(\text{ClO}_4)_2 + \text{H}_2\text{sala} + \text{phen} + 2\text{LiOH}]$ (-----) to indicate the difference between them.

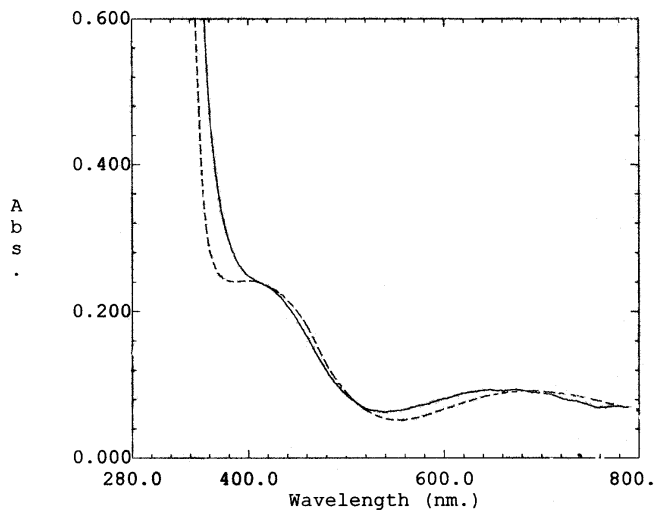


Fig. S16. Variation of UV-vis spectra by the addition of equimolar of NaOH to **5** which spectra is the same as the spectra of $[\text{Cu}(\text{ClO}_4)_2 + \text{H}_2\text{Sala} + \text{phen} + 2\text{LiOH}]$ solution but not the spectra of **2**.

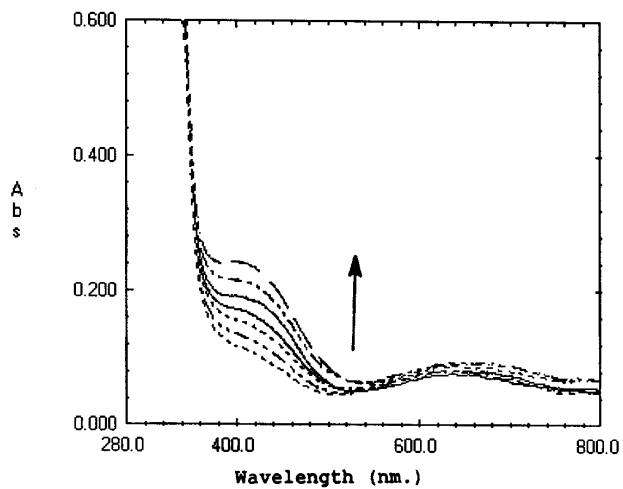


Fig. S17. Variation of UV-vis spectra by the addition of equimolar of HClO₄ to [Cu(ClO₄)₂ + H₂sala + phen + 2LiOH] indicate formation of **5**

