

## **Dicopper model compounds of a septadentate ligand for the type (III) site in hemocyanin biomolecules**

DEBASHIS RAY

Department of Chemistry, Indian Institute of Technology, Kharagpur 721 302, India

A series of model complexes for the type III site, in oxidised hemocyanin, containing  $\text{Cu}_2(\mu\text{-O})^{2+}$  core synthesized and characterized using a septadentate ligand (L) formed from the Schiff-base condensation of triethylenetetramine with salicylaldehyde. These have the formula  $[\text{Cu}_2(\text{L})]\text{XnH}_2\text{O}$  ( $\text{X} = \text{Cl}, \text{ClO}_4$ ) and  $[\text{Cu}_2(\text{L})\text{X}]\text{NHO}$  ( $\text{X} = \text{OAc}, \text{N}_3, \text{NO}_3$ ) – In the latter set of compounds X serve as one of two bridging ligands, the other coming from the phenoxide group of the binucleating ligand. The 1,3 bridging of azide is supported by a phenoxide bridge from L and avoid the likely steric congestion of the alternative possibility, a 1,1 bridging mode. Methanol solution of the acetate complex shows an electronic absorption band at 635 nm. The copper-copper magnetic interaction is dependent on the presence and nature of X in the two series of complexes.