



**ESR Spectral Studies of some Copper (II) Complexes of  
1-(1-hydroxy-2-naphthyl)-3-(phenyl or substituted phenyl)-prop-2-en-1-ones**

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**ABSTRACT**

*Some copper (II) complexes of naphthalene analogues of 2'-hydroxychalcones have been synthesized and characterized. The copper (II) complexes have the general formula  $CuL_2$ , where, L is the deprotonated ligand, the naphthylchalcone. In the present investigation, from the ESR spectra, g, A, G and empirical factor f values for all the complexes are calculated and these are consistent with the fact that copper is involved in square-planar coordination with the naphthylchalcone ligands. The importance of this ESR values are discussed at length as in co-ordination chemistry ESR or EPR or EMR (Electron Magnetic Resonance) plays complementary role in elucidating the structure of coordination complexes, since Cu (II) ion is of paramagnetism. The magnetic moments of Cu (II) complexes are also calculated from their ESR spectra.*

**Keywords:** ESR, EPR, chalcones, complexes, absorption, bonding.

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