

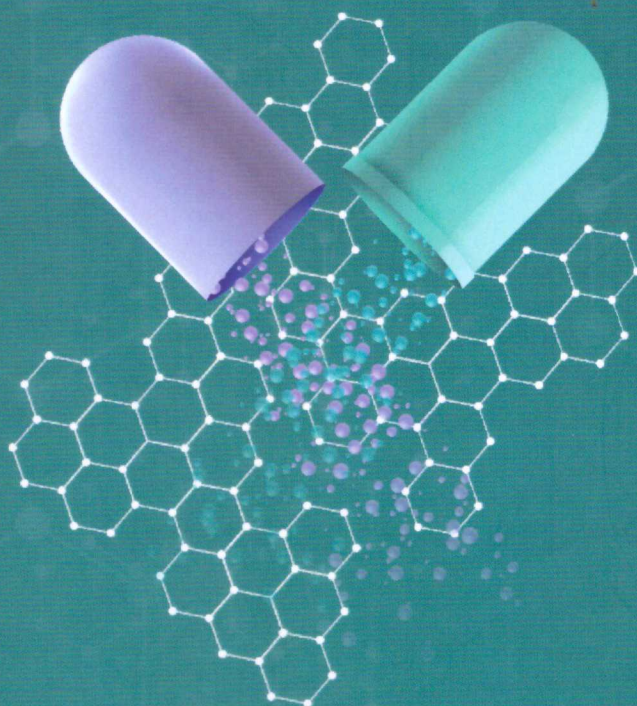


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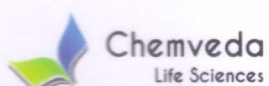
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ABSTRACT

Synthesis and Characterization of Copper (II) Complexes Containing Schiff Base Ligand with Biological Activities

R. Karthika ^A, J. Kanisious Mary ^A, Dr. B. Vinosha ^b and Dr. J. Annaraj ^C

^aDepartment of Chemistry, Fatima college, Madurai- 625018, Tamil Nadu, India

^bAssistant Professor, Department of Chemistry, Fatima College, Madurai- 625018

^cAssociate Professor and Head, Department of Material science, School of Chemistry, Madurai

Kamaraj University, Madurai-625021.

karthikaram112@gmail.com

Schiff bases are quite valuable chemical that have the usage properties in the area of medicine, chemistry, pharmaceutical chemistry and industry. Metal- imine complexes have been widely investigated due to their anti-fungal, anti-bacterial, antitumor and herbicidal activity. They can work as models for biologically important species. Metal complexes of Cu(II) ions with Schiff base ligand benzyl acetone was derived from the condensation reaction of 2-aminobenzidine. The structure and spectral properties of ligand and complexes were confirmed by UV – Visible, IR and ESR spectra. IR spectral studies show the N and O atom of the Schiff bases are binding sites of ligand with the metal ion. Molar conductance measurements gave evidence in favor of non- electrolytic nature of the complexes. Magnetic susceptibility data coupled with electronic spectra suggested that the square planar structure of Cu (II) complexes. The Schiff base ligands and their complexes were subjected to antimicrobial studies. All the synthesis compound showed moderate to strong antibacterial activity. The complexes showed higher antibacterial activity than their corresponding ligand.

Reference:

1. Silva da C., Silva da D., Modolo L., Alves R.: Schiff bases: A short review of their antimicrobial activities. J. Ad. Res., 2011, 2, 1–8.
2. Naeimi H., Safari J., Heidarneshad A.: Dyes Pigments, 2007, 73, 251.
3. Lippard S. J., Berg J. M.: Principles of bioinorganic chemistry. University, Science Books, California, 1990.