



**Mixed ligand Co(II) Complexes: Synthesis, Characterization,
DNA binding and Photocleavage Studies**

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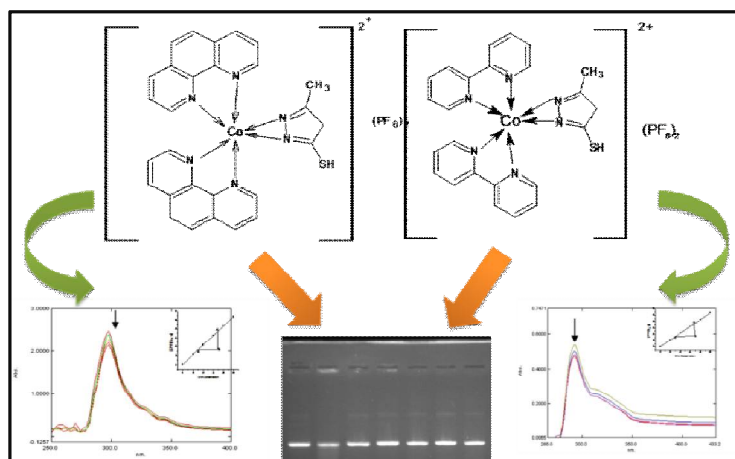
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ABSTRACT

A new cobalt complex of the $[M(L1)_2(L2)]^{n+}$ where M is a Cobalt metal ion and L1= phenanthroline/ bipyridine, L2= 5-methyl-1,3,4-thiadiazole-thiole, have been synthesized and characterized by elemental analysis(CHN), FT-IR and UV-visible(UV-Vis) spectroscopic techniques. The DNA-binding property of the complexes has been investigated employing absorption spectroscopy, viscosity measurements and thermal denaturation study. The DNA cleavage experiments were carried out by gel electrophoresis method using pUC19 DNA. The experimental results show that both complexes can bind to DNA in an intercalation mode.

Graphical Abstract



Keywords: Thiadiazole, Elemental analysis, Electrophoresis, Intercalation