
SYNTHESIS AND CHARACTERIZATION OF [Pd(PDCT)L] COORDINATION COMPOUNDS

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Carbon Tetrachloride (CT), a popular industrial solvent, and potential environmental contaminant of water and soil. An approximate ten square Kilometer plume of soil at the department of energy's site in Hanford, Washington has been polluted with CCl₄. Our research is based on the study of potential CT environmental remediation technologies. Furthermore, we are interested in 2,6-pyridinedithiocarboxylic acid, or PDTC, and the dechlorination properties of its copper based coordination compounds, [Cu(PDTC)L] X. We seek to understand the link between coordination compound electronic structure and reactivity. To further understand electronic structure and reactivity of these copper coordination compounds, we synthesized several Palladium-based (Pd) coordination compounds. In this study we present IR, UV-Vis, and NMR evidence for the successful synthesis of a series of [Pd(PDTC)L]X coordination compounds. Here L=Br, CN, PPh₃ as well as the dimer species [Cu(PDTC)₂].