

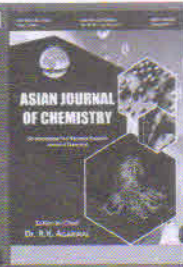


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Cationic Iron Half-Sandwich Complexes of Aminopyridines: Synthesis and Characterisation

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The reaction of $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2]^+$ with the aminopyridine ligands lead to formation of cationic organometallic complexes of the general formula $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2\text{L}]^+$ (where L = 2-Apy, 3-Apy, 4-Apy and Apy = aminopyridine). These ligands have the ability to coordinate to a metal center in monodentate fashion *via* the pyridine ring or amine nitrogen atoms, can form chelate complexes with one metal center or bridge two metal ions. Spectroscopic data (FTIR, ^1H and ^{13}C NMR and elemental analysis) collected for the five metal complexes is consistent with monodentate coordination mode through the pyridyl nitrogen in complexes 2, 3 and 4 atoms and amine nitrogen in complexes 1 and 4.

Keywords: Iron complexes, Half-sandwich, Aminopyridines, Synthesis.