Synthesis and Spectroscopic Study of Pd(II) Coordination Compounds with New Pyridine-substituted *N*-Methylisoxazolidines

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Abstract - New pyridine-substituted isoxazolidine derivatives, 2-(2-methyl-3-ferrocenylisoxazolidin-5-yl)-pyridine (LFc) and 2-(2-methyl-3-phenylisoxazolidin-5-yl)pyridine (LPh) were synthesized. Palladium(II) complexes were obtained by their reaction with $Na_2[PdCl_4]$ and $[Pd(PEt_3)Cl_2]_2$ in nonaqueous media. The complexes $Na[Pd(LPh)Cl_3]$ and *cis*-$[Pd(LPh)_2Cl_2]$ are formed with $Na_2[PdCl_4]$ at the initial molar ratios Pd^{2+} : LPh 1 : 1 and 1 : 2, respectively, with monodentate coordination of the ligand. In the case of LFc only the $[Pd(LFc)Cl_2]$ complex is formed with the bidentate coordination of the ligand. The reaction between $[Pd(PEt_3)Cl_2]_2$ and LFc yields *trans*-$[Pd(LFc)(PEt_3)Cl_2]$. All the complexes have a square-planar configuration.