

# EXPERIMENTAL AND QUANTUM-CHEMICAL STUDIES OF $^1\text{H}$ , $^{13}\text{C}$ AND $^{15}\text{N}$ NMR COORDINATION SHIFTS IN Au(III), Pd(II) AND Pt(II) CHLORIDE COMPLEXES WITH PICOLINES

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$^1\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  NMR studies of gold(III), palladium(II) and platinum(II) chloride complexes with picolines (or methylpyridines, MPy: 2-methylpyridine, 2mpy; 3-methylpyridine, 3mpy; 4-methylpyridine, 4mpy) having general formulae  $[\text{Au}(\text{Mpy})\text{Cl}_3]$ , *trans*- $[\text{Pd}(\text{Mpy})_2\text{Cl}_2]$ , *trans*-/*cis*- $[\text{Pt}(\text{Mpy})_2\text{Cl}_2]$  and  $[\text{Pt}(\text{Mpy})_4]\text{Cl}_2$  were performed and the respective chemical shifts reported.  $^1\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  coordination shifts (*i.e.* differences between chemical shifts of the same atom in complex and ligand molecules) of various sign and magnitude were discussed in relation to the type of complex (neutral and ionic), central atom (Au(III), Pd(II), Pt(II)), geometry (*trans/cis*), and the position of methyl group in the pyridine ring system.