A Study of Competitive Coordination of Benzochalcogenazole Ligands by Heteronuclear NMR Spectroscopy

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Abstract - Complexes of 2-methyl(phenyl)benzo-1,3-tellurazole and 2-methyl(phenyl)benzo-1,3-selenazole with tungsten pentacarbonyl and boron trifluoride were studied by heteronuclear NMR spectroscopy (^{1}H, ^{13}C, ^{77}Se, and ^{125}Te). The coordination mode of the ambident ligand can be determined from the coordination shifts of the ^{125}Te and ^{77}Se NMR signals: upfield at coordination via Te and Se atoms and downfield at N coordination.