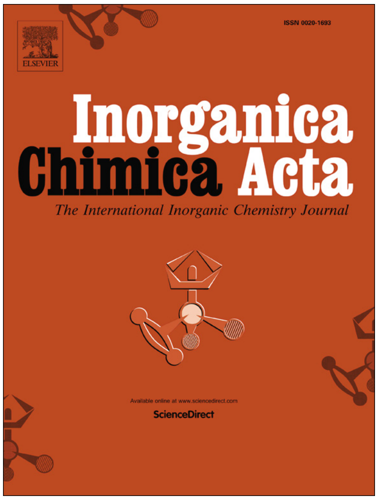

Research paper

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Reactivity of hemilabile pyridyl- and methyl-substituted pyrimidylselenolates with [MCl_2(dppf)] (M = Pd, Pt; dppf = bis(diphenylphisphino)ferrocene)

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Abstract:

The bis(diphenylphisphino)ferrocene (dppf) derived palladium analogue of [$PdCl_2$(dppf)] on reaction with the sodium salt of pyridyl/pyrimidyl selenolate yielded mononuclear *cis* configured complex [Pd(SeAr)$_2$(dppf)] (Ar = C_5H_4N, $C_4H(4,6\text{-}Me)_2N_2$), as did the platinum precursor [$PtCl_2$(dppf)] with methyl substituted pyrimidyl salt giving [Pt{$SeC_4H(4,6\text{-}Me)_2N_2$}$_2$(dppf)]. In contrast, the reaction of platinum precursor with the sodium salt of pyridylselenolate gave two different complexes $[Pt_2(\mu\text{-}SeC_5H_4N)_2(dppf)_2]^{2+}$ and [Pt(Cl)(SeC_5H_4N)(dppf)] depending in the reaction solvent. These complexes were characterized by elemental analysis and NMR (^{1}H, ^{31}P) spectroscopy. The molecular structure of [Pt{$SeC_4H(4,6\text{-}Me)_2N_2$}$_2$(dppf)] was established by single crystal X-ray diffraction analysis.

Keywords: Selenolate, NMR, X-ray, dppf.