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Research paper

Reactivity of hemilabile pyridyl- and methyl-substituted pyrimidylselenolates with  $[MCl_2(dppf)]$  ( $M = Pd, Pt$ ;  $dppf = \text{bis}(\text{diphenylphosphino})\text{ferrocene}$ )

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**Reactivity of hemilabile pyridyl- and methyl-substituted pyrimidylselenolates with  $[MCl_2(dppf)]$  ( $M = Pd, Pt$ ;  $dppf = \text{bis}(\text{diphenylphosphino})\text{ferrocene}$ )**

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**Abstract:**

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

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

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