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SYNTHESIS AND COORDINATION OF 2-(DIIPHENYLPHOSPHINO)PICOLINAMIDE

Stephen Mark Aucott^a; Alexandra M. Z. Slawin^a; Heather L. Milton^a; Matthew V. Wheatley^a; J. Derek Woollins^a

^a University of St. Andrews, Fife, Scotland

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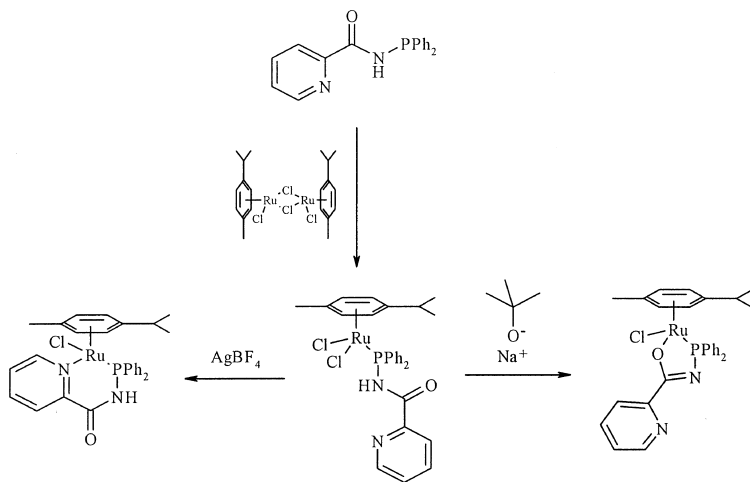
SYNTHESIS AND COORDINATION OF 2-(DIIPHENYLPHOSPHINO)PICOLINAMIDE

*Stephen Mark Aucott, Alexandra M. Z. Slawin,
 Heather L. Milton, Matthew V. Wheatley, and J. Derek Woollins
 University of St. Andrews, Fife, Scotland*

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The ligand 2-(diphenylphosphino)picolinamide (dpppa) is readily prepared by addition of a thf solution of Ph_2PCl to a thf solution of picolinamide and Et_3N , followed by overnight reflux. The chalcogen derivatives are easily prepared on reaction with H_2O_2 , S or Se, for the oxide, sulfide, and selenide respectively. Reaction of dpppa with $[\text{MCl}_2(\text{cod})]$ ($\text{M} = \text{Pt}$ or Pd), $[\{\text{MCl}(\mu\text{-Cl})(\eta\text{-C}_5\text{Me}_5)\}_2]$ ($\text{M} = \text{Rh}$ or Ir), $[\{\text{RuCl}(\mu\text{-Cl})(p\text{-Cymene})\}_2]$, $[\{\text{Pd}(\mu\text{-Cl})(\eta\text{-C}_3\text{H}_6)\}_2]$, $[\{\text{Pd}(\mu\text{-Cl})(\text{C}_{10}\text{H}_6\text{NO})\}_2]$, $[\{\text{Pd}(\mu\text{-Cl})(\text{C}_9\text{H}_{12}\text{N})\}_2]$, $[\{\text{Pd}(\mu\text{-Cl})(\text{C}_{12}\text{H}_{12}\text{N})\}_2]$, $[\{\text{PtCl}(\mu\text{-Cl})(\text{PR}_3)\}_2]$ ($\text{PR}_3 = \text{PMe}_2\text{Ph}$ or PET_3) generates the corresponding monodentate complexes. Further reaction of the monodentate complexes with AgBF_4 or NaO^tBu provide N and O bound bidentate complexes respectively (Scheme 1).



SCHEME 1

Address correspondence to Matthew V. Wheatley, Department of Chemistry, University of St. Andrews, Fife 34169ST, Scotland. E-mail: mvm@st-andrews.ac.uk