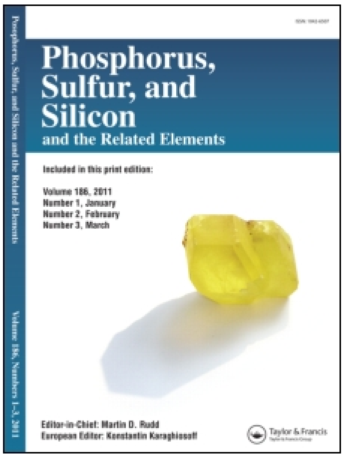

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SYNTHESIS AND COORDINATION CHEMISTRY OF *N*-(DIPHENYLPHOSPHINO) DIALLYLAMINE

Alexandra M. Z. Slawin[a]; Joanne Wheatley[a]; J. Derek Woollins[a]
[a] University of St. Andrews, Fife, Scotland

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SYNTHESIS AND COORDINATION CHEMISTRY OF *N*-(DIPHENYLPHOSPHINO) DIALLYLAMINE

Alexandra M. Z. Slawin, Joanne Wheatley,
and J. Derek Woollins
University of St. Andrews, Fife, Scotland

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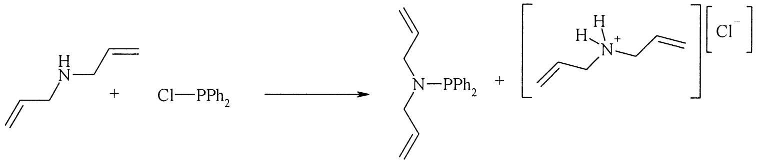
Keywords: diphenylphosphino diallylamine; metal complexes

N-(diphenylphosphino)diallylamine (**1**) is a potential tridentate ligand containing both phosphorus and olefinic donor sites. Its preparation is straightforward and involves the addition of chlorodiphenylphosphine to a 2-fold excess of diallylamine in toluene.[1]



(1)

A study of the coordination chemistry of **1** has shown some interesting results. Reactions of **1** with [PtCl$_2$(cod)] and [PdCl$_2$(cod)] (cod = 1,5-cyclooctadiene) has furnished a variety of complexation products. Analysis of these products by multi-nuclear NMR, FAB mass spectra, and elemental analysis has provided suggested structures of the complexes formed. Single crystal x-ray crystallographic analysis of the 1:1 [PdCl$_2$(cod)]:**1** product shows that the ligand adopts a bidentate P/η^2 allyl coordination mode resulting in the formation of a five-membered PdPNC$_2$ metallacycle.

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[1] H. H. Sisler and N. L. Smith, *J. Org. Chem.*, **26,** 611 (1961).

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Address correspondence to Joanne Wheatley, School of Chemistry, University of St. Andrews, Fife KY169ST, Scotland. E-mail: jw38@st-andrews.ac.uk