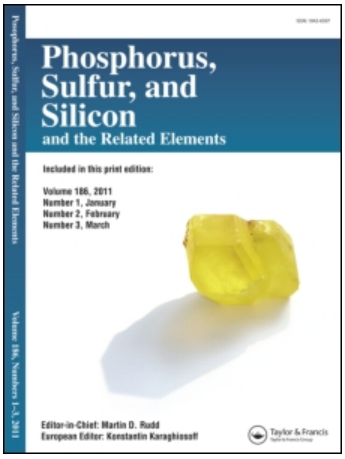


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# Diallylphosphines as New Bidentate Ligands in Iridium Complexes

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# Diallylphosphines as New Bidentate Ligands in Iridium Complexes

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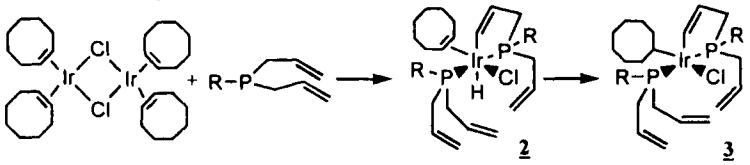
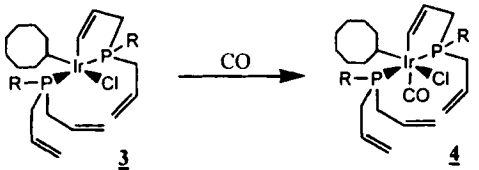
Addition of four equivalents of tButyldiallylphosphine to a solution of one equivalent of $[(COE)_2IrCl]_2$ in $CHCl_3$ at low temperature produced two isomers of the metallated complex **2**, formed by C-H activation. **2** evolve at 40°C to **3**, by a hydride transfer from iridium to the cyclooctene (COE) ligand.




$^{13}C$ NMR analysis of **2** showed the presence of three different allyl moieties, showing that the unsaturation at the iridium center is fulfilled by intramolecular interactions, perhaps, with the allyl fragments of the phosphine which are not metallated. The lability of **3** has been demonstrated by bubbling CO to obtain the corresponding cabonyl complexes **4**.




Analogue results have been observed with diisopropylamino and anisyldiallylphosphines.

These results show that diallylphosphines can be considered to be a new family of bidentate ligands.

## *References*

[1] E. Ocando-Mavarez, M. Rosales and N. Silva, Heteroatom Chem., 9, 1998, 253.