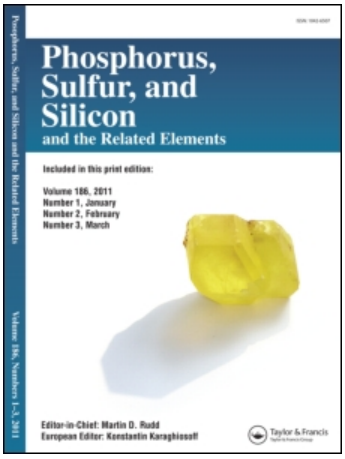

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X--H (X=C,N,O,P,S) Bond Activations Induced by β-Heterosubstituted Zirconaindenes

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X–H (X=C,N,O,P,S) BOND ACTIVATIONS INDUCED BY β-HETEROSUBSTITUTED ZIRCONAINDENES

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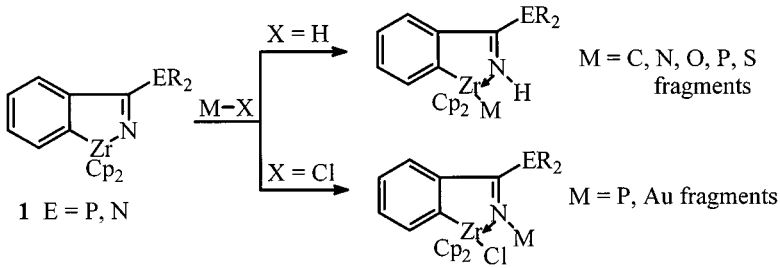
Our research, which is concerned with the studies of interactions between group 4 elements and main group elements has shown that the presence of phosphino groups in α- or β-position relative to a zirconium center can often induce unusual reactions in comparison to those observed with more classical organic zirconium species. We describe here the unique properties of the phosphines **1** that allow sp, sp^2, and sp^3 C–H [1,2] as well as X–H bond activations (X=O,N,P,S) in the formation of new 18-electron zirconium complexes; these complexes can by used as efficient reagents for the formation a variety of species bearing P–C, P–O–P–N or P–S bonds.



1 E = P, N

SCHEME 1

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