Olefins from carbonyls –

Development of new phosphorus-based cross-coupling reactions

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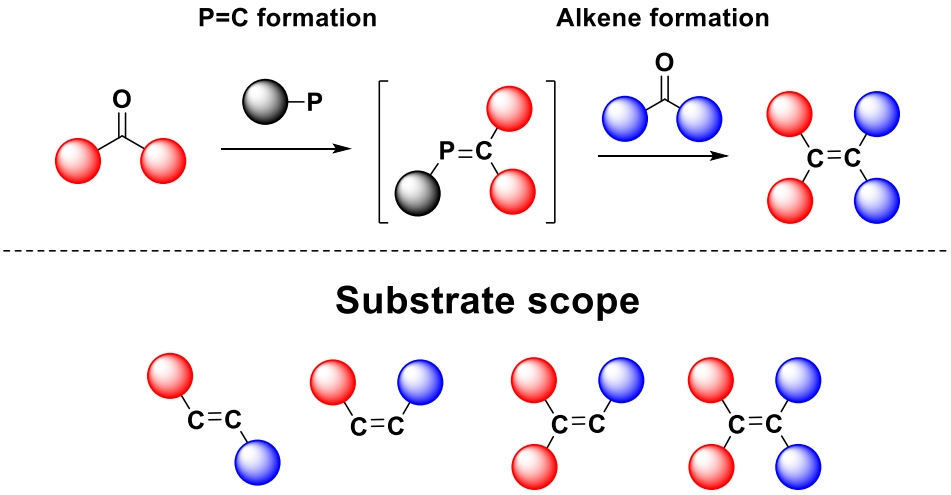
Phosphaalkenes have been known for several decades. Since their discovery,[1] phosphaalkenes have been mainly used in coordination and polymer chemistry.[2] Only recently we have been able to convert differently substituted phosphaalkenes into olefins, with the net result of creating new carbonyl cross-coupling olefinations. In this presentation, we show our procedures in which two aldehydes have been selectively coupled to *E* and *Z* 1,2-disubstited alkenes,[3] trisubstituted olefins have been obtained by the coupling of a ketone and an aldehyde,[4] and ultimately tetrasubstituted olefins have been formed from two ketones.[5]



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