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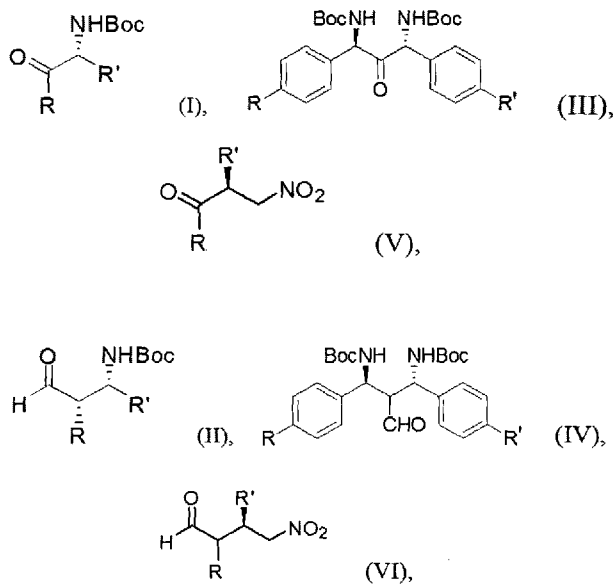
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(54) Title: METHOD OF PREPARING CHIRAL KETONES FROM ALDEHYDES



(57) Abstract: Present invention relates to a method of preparing a chiral α - or β -substituted ketone from the corresponding β - or γ -substituted aldehyde, wherein the ketone has formula (I), (III) or (V), and the corresponding aldehyde has formula (II), (IV) or (VI), respectively, the method comprising reacting the aldehyde of formula (II), (IV) or (VI) in the presence of an amine, oxygen and an organic solvent, wherein the reaction is carried out in the absence of a metal-based catalyst or a metal-based oxidant, wherein: R is H, a substituted or unsubstituted C₁-C₁₀ alkyl, substituted or unsubstituted C₂-C₁₅ alkenyl, substituted or unsubstituted C₂-C₁₅ alkynyl, substituted or unsubstituted C₃-C₁₅ cycloalkyl, substituted or unsubstituted C₃-C₁₅ cycloalkenyl, substituted or unsubstituted C₃-C₁₅ heterocycloalkenyl, substituted or unsubstituted C₆-C₁₅ heterocycloalkenyl, substituted or unsubstituted C₆-C₁₅ aryl, or substituted or unsubstituted C₆-C₁₅ heteroaryl; and R' is H, a substituted or unsubstituted C₁-C₁₀ alkyl, substituted or unsubstituted C₂-C₁₅ alkenyl, substituted or unsubstituted C₂-C₁₅ alkynyl, substituted or unsubstituted C₃-C₁₅ cycloalkyl, substituted or unsubstituted C₃-C₁₅ cycloalkenyl, substituted or unsubstituted C₃-C₁₅ heterocycloalkenyl, substituted or unsubstituted C₃-C₁₅ heterocycloalkenyl, substituted or unsubstituted C₆-C₁₅ aryl, or substituted or unsubstituted C₆-C₁₅ heteroaryl.