

diphenylmethane derivatives

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Catalytic Asymmetric Synthesis of Diarylacetates and 4,4-Diarylbutanoates. A Formal Asymmetric Synthesis of (+)-Sertraline.

— The $\text{Rh}_2((S)\text{-DOSP})_4$ -catalyzed decomposition of aryldiazoacetates (I) and (IV) with cyclohexadiene (II) proceeds by insertion of the carbenoid into the allylic C–H bond to furnish (aryl)cyclohexadienylacetates [cf. (V)] with high asymmetric induction. The reaction of vinyldiazoacetates (VIIa)–(VIId) with cyclohexadiene (VIII) in the presence of the chiral rhodium catalyst unexpectedly affords 4-cyclohexadienylbutenoates (IXa)–(IXd) as formal C–H insertion–Cope rearrangement products in excellent stereoselectivity. This reaction can be successfully applied to the synthesis of 6-phenyl-4-cyclohexadienylhexadienoate (IXe) and the corresponding cyclohexylideneacetate (XI). Additionally, derivative (IXc) is shown to be a useful intermediate in the synthesis of the antidepressant (+)-sertraline (XII). — (DAVIES, HUW M. L.; STAFFORD, DOUGLAS G.; HANSEN, TORE; *Org. Lett.* 1 (1999) 2, 233-236; Dep. Chem. Eng., State Univ. N. Y., Buffalo, NY 14260, USA; EN)

