

# Rhodium-Catalyzed Enantioselective Cyclopropanation of Electron Deficient Alkenes and Acceptor/Acceptor Diazo Reagents.

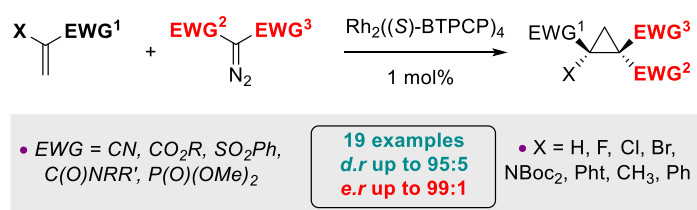
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Rh-catalyzed cyclopropanation reactions have been extensively documented with electron-rich alkenes, as their intrinsic reactivity makes them highly compatible with catalytically active electrophilic rhodium carbenes. In contrast, the cyclopropanation of electron-deficient alkenes using diazo compounds poses a considerable challenge due to their lower nucleophilicity and reduced ability to interact efficiently with rhodium carbenes.<sup>1</sup> Moreover, only one reaction has utilized diazo diacceptor compounds with electron-deficient olefins.<sup>2</sup> Herein, we report the enantioselective cyclopropanation of electron-deficient alkenes using diazo diacceptor derivatives, with  $\text{Rh}_2((\text{S})\text{-BTPCP})_4$  or  $\text{Rh}_2((\text{R})\text{-BTPCP})_4$  as chiral catalysts. This reaction enabled the synthesis of highly functionalized cyclopropanes, which were obtained in moderate to excellent yields, with high diastereoselectivities and excellent enantiomeric ratios.



**Figure 1.** Enantioselective Cyclopropanation between Electron Deficient Alkenes and Acceptor/Acceptor Diazo Reagents.

1 C. Name, P. Name, *Journal*, **year**, *vol*, first page (Arial 10).

2 Lin, W.; Charette, A. B. *Adv. Synth. Catal.* **2005**, 347, 1547.