Dinuclear Ruthenium(I) Triazenide Complexes as Catalysts for Carbenoid Cyclopropanation Reactions

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The ability of ruthenium(I) triazenide complexes $[Ru(CO)_3(ArNNNAr)]_2$ (Ar = C_6H_4-4-X, X = CH_3, Cl, Br) to catalyze the cyclopropanation of alkenes with methyl diazoacetate is investigated. With terminal alkenes (styrene, ethyl vinyl ether, 1-hexene), the cyclopropanecarboxylic esters are formed in good to high yield and with an *E* : *Z* diastereoisomer ratio of about 1.0 in most cases. 2-Methyl-2-butene is cyclopropanated in low yield but with a *syn*-selectivity up to 90:10.

Key words: Catalysis, Cyclopropanation, Diazo Compounds, Ruthenium Complexes, Triazenide Ligands