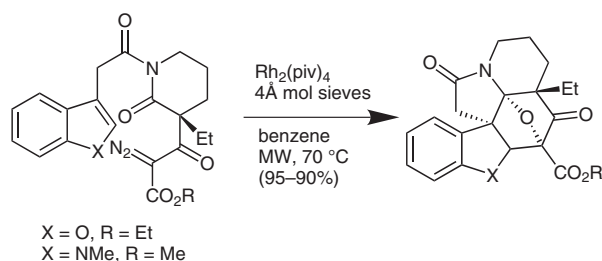


Cycloaddition Chemistry of 2-Vinyl-Substituted Indoles and Related Heteroaromatics



Significance: This report demonstrates the use of Rh(II)-catalyzed in situ generated push-pull dipoles in intramolecular 1,3-dipolar cycloadditions to derive pentacyclic frameworks in a stereocontrolled fashion. The push-pull dipoles are generated from readily prepared diazo 1,3-dicarbonyl compounds within several heteroaromatic systems (indoles, benzofurans, furans and thiophenes).

Comment: Cycloaddition reactions are efficient and stereoselective strategies for the construction of multifused ring systems. This contribution constitutes a systematic study which demonstrates the rapid assemblage, from easily constructed intermediates, of complex derivatives some of which are related to indole alkaloids.