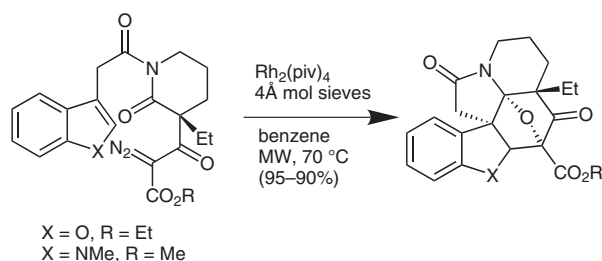


## Cycloaddition Chemistry of 2-Vinyl-Substituted Indoles and Related Heteroaromatics



**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.

Category

Synthesis of Heterocycles

Key Words

intramolecular cycloaddition  
push-pull dipoles  
indoles