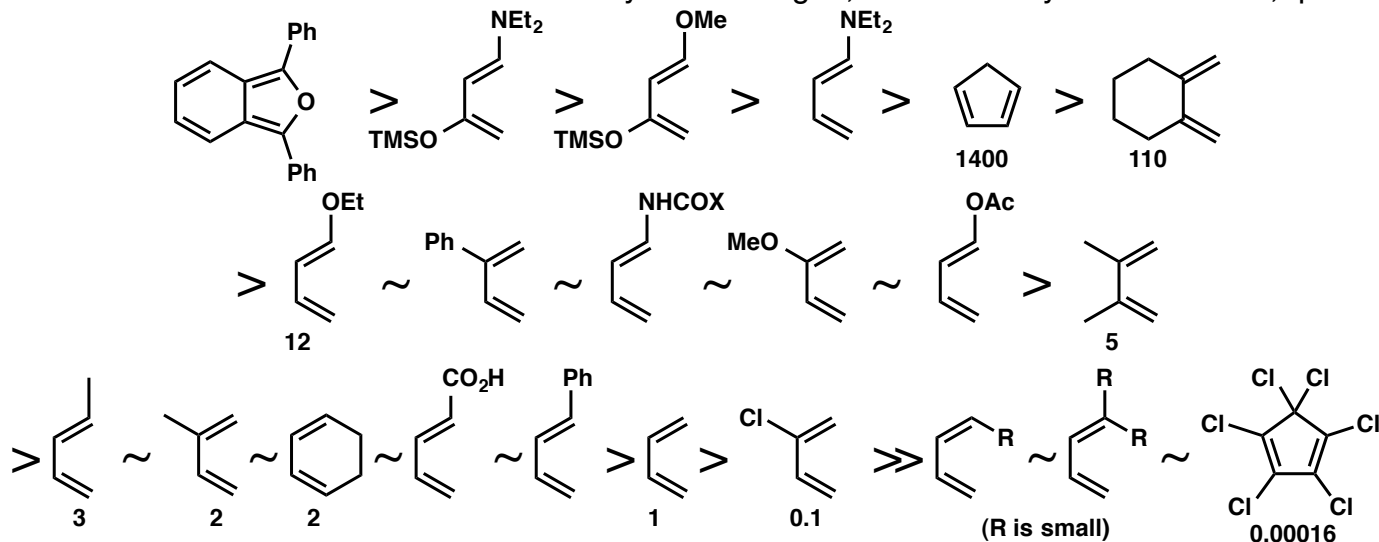


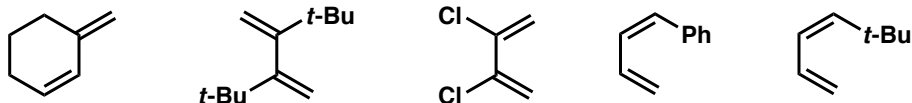
Relative Reactivity in Normal Electron-Demand Diels-Alder Reactions

CHEM 6352

Dienes: Relative Reactivities with Maleic Anhydride: Huisgen, R. "Chemistry of the Alkenes," p. 921



Completely Unreactive:

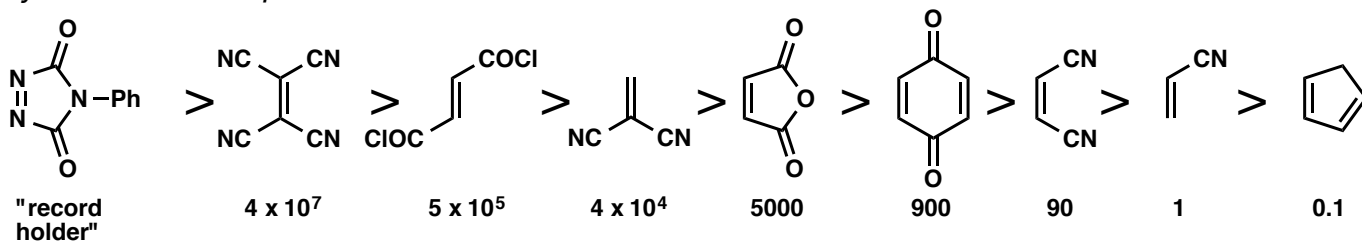


Diene reactivity is increased by:

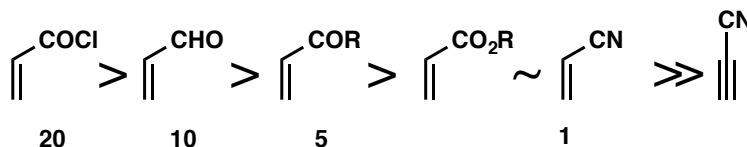
(A) e⁻-donating groups, (B) planarity of the system, and (C) ability to adopt an *s-cis* conformation

Dienophiles: Relative Reactivities with Cyclopentadiene: Houben-Weyl 5/1C p. 1026

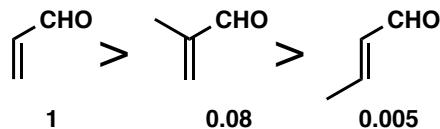
Very Reactive Dienophiles:



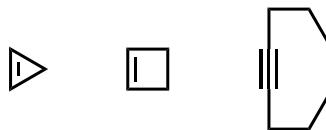
Mono-Activated Dienophiles



-another series:



Reactive Unactivated Dienophiles



Dienophile reactivity is increased by:

(A) electron-withdrawing substituents, (B) a weak π -bond, and (C) release of ring strain.