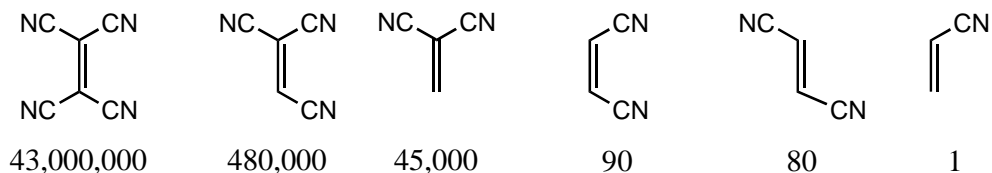


Organic Synthesis
Chem 144
M. E. Jung

General Rules for Dienophiles in Diels-Alder Reactions

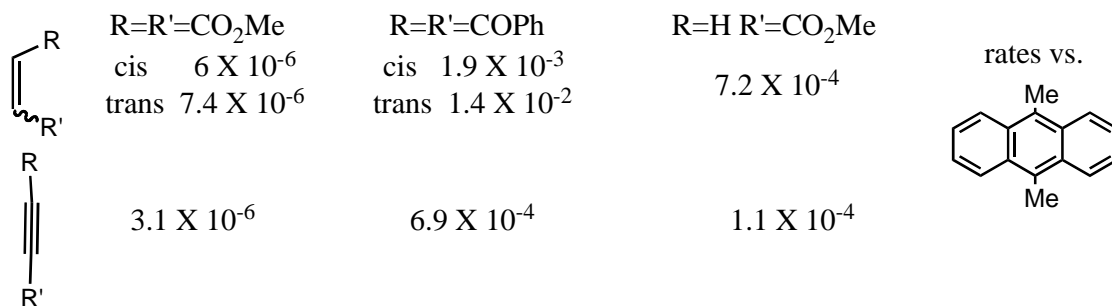
1) The more electron-withdrawing, the better!



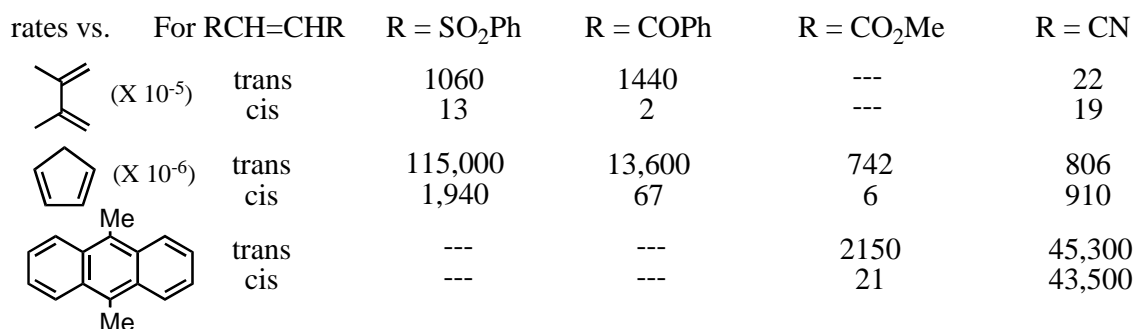
2) Relative reactivity of functional groups.



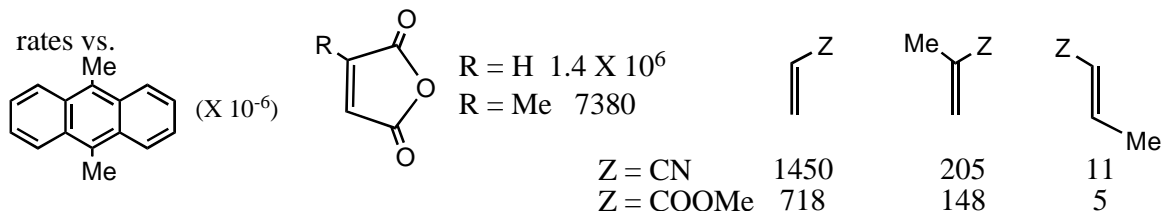
3) Acetylenes are okay and comparable in reactivity to the corresponding alkene.



4) Trans alkenes in general react faster than cis alkenes.



5) Alkyl substitution on the dienophile retards the reaction



6) Other multiple bonds are also possible as dienophiles, not just C=C and C≡C.

