

Course Chem 343 11 AM Lecturer Gellman
Day Friday Date 12/9/11
Notes Taken By Herndon Total # of Pages 4

Submit a *Single-sided Copy* to the Office
DO NOT STAPLE

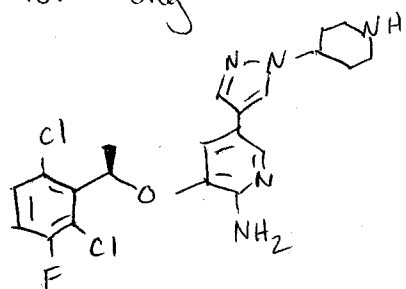
Final Exam

10:05 AM Monday 19th Dec

Ingraham BIO

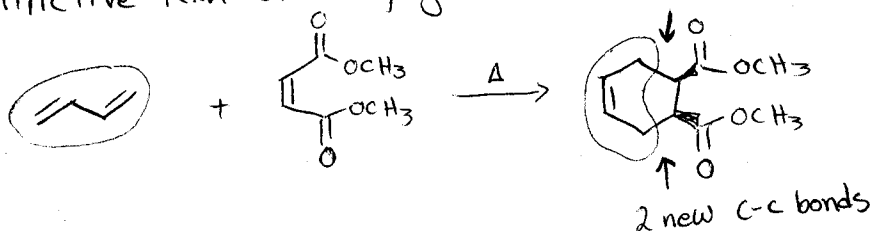
cumulative (chaps 14+15 will be emphasized)

New drug for lung cancer

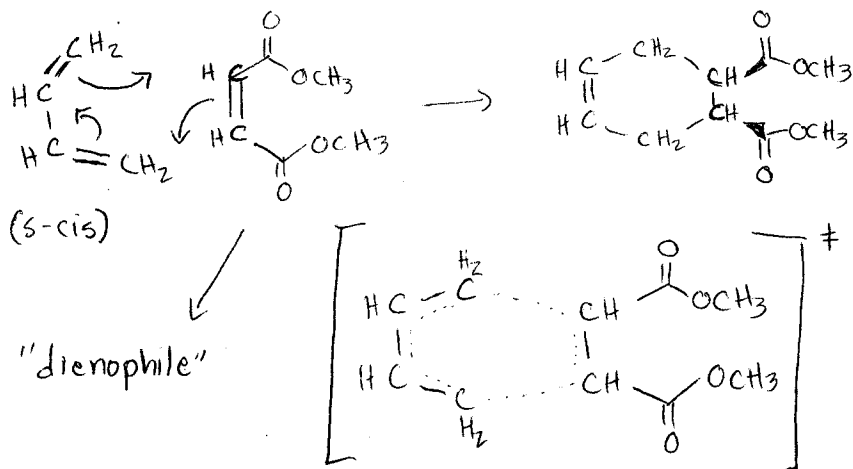


"crizotinib"

Distinctive Rxn of conjugated dienes - "Diels-Alder Rxn"

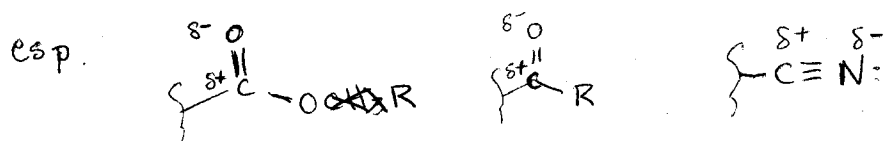


Mechanism hypothesis (concerted):

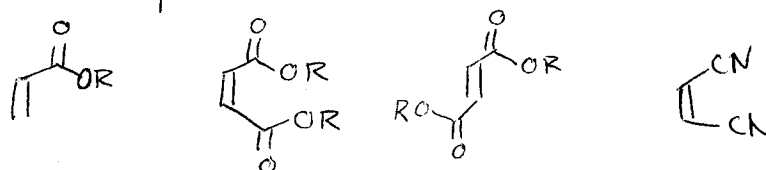


Submit a *Single-sided Copy* to the Office
DO NOT STAPLE

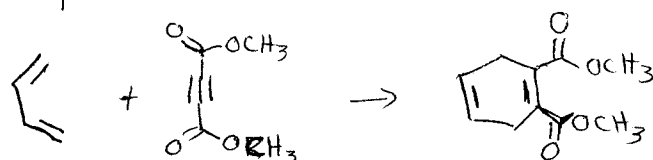
Common to observe that dienophiles bear electron-withdrawing substituents.



Thus, common dienophiles include:



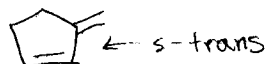
Alkyne dienophiles react as well



Because diene must be s-cis for D-A rxn, "locked" s-cis dienes are very reactive.



Diene locked into s-trans conf. CANNOT undergo D.A. Rxn

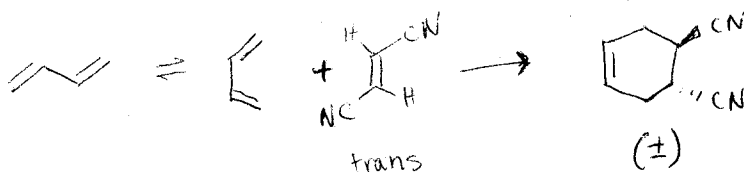


Submit a *Single-sided Copy* to the Office
 DO NOT STAPLE

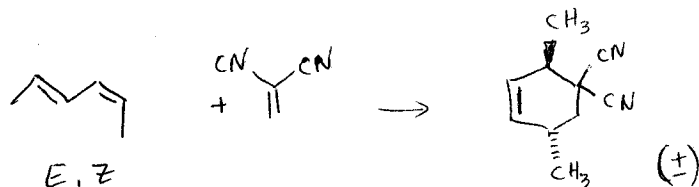
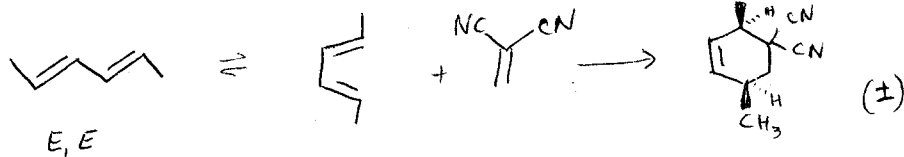
Stereochemistry

1) Dienophile

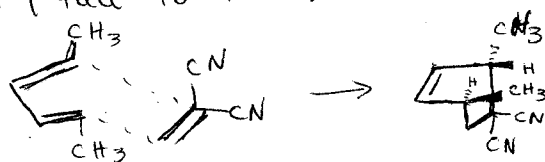
Ex:



2) Diene

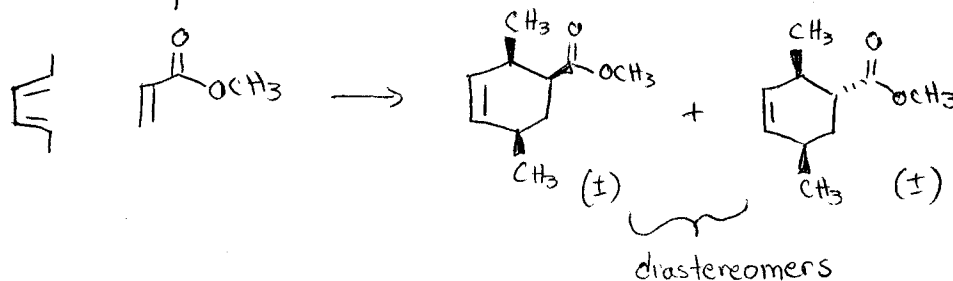


These stereochemical consequences reflect physical approach of D-A reactants ("face-to-face"):



3) Diene + Dienophile

Ex.

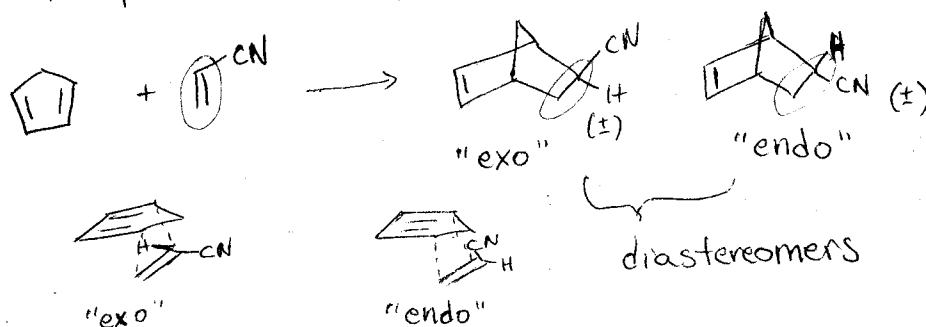


Submit a *Single-sided Copy* to the Office
 DO NOT STAPLE

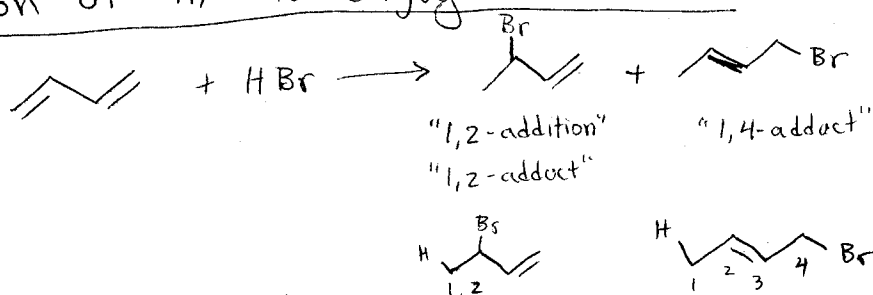
Diastereomers arise from different orientations of dienophile rel. to diene.



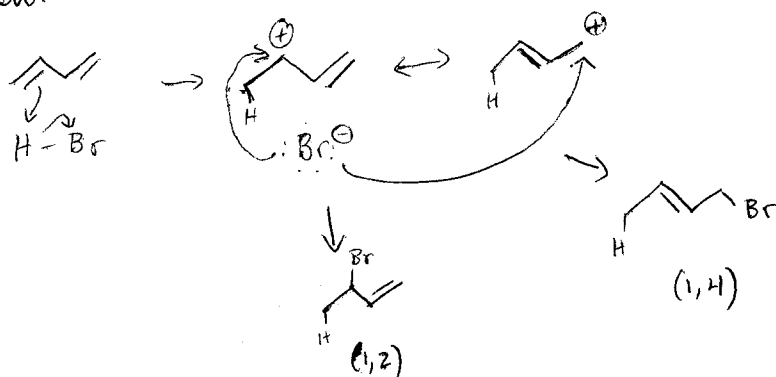
Another example:



Addition of HX to conjugated dienes -



Mech:



Intermediate = "allyl carbocation"

