*CHEM 342 – Lecture 7 29/01/15*

Overheads: - Today’s Outline

Quiz 2:

Recap Thursday: Diels-Alder Reaction



Regiochemistry: generally get “ortho/para-like” products.

Try:



Other examples of cycloadditions [4+2]:

Dieneophiles:

* can be triple bonds:



* can have other atoms:



Cheletropic Cycloaddition:

* both new  bonds formed to same atom



Another example: (similar to lab #8)



Recap Pericyclic Reactions so far: Woodward-Hoffman Rules

Electrocyclic: 4n / even  = con

h = dis

4n+2 odd  = dis

h = con

Cycloaddition: 4n / even  = antara

h = supra

4n+2 odd  = supra

h = antara

Sigmatropic Rearrangements:

*  bond changes position



Numbering/naming system:

* Numbered according to how far  bond has moved on each end



Another example:



Woodward-Hoffman Rules

4n+2 odd  = supra

h = antara (if goes, is by different mechanism)

4n / even  = antara

h = supra

\*\*\*identical rule as for cycloaddition!