*CHEM 342 – Lecture 8 10/01/15*

Overheads: - Today’s Outline

Recap Sigmatropic Reactions:

WH Rule: 4n / even  = antara X

h = supra

4n+2 odd  = supra

h = antara X

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

Example: [1,3] rearrangement



More common examples are thermal/odd pairs. 6 e– most common: [3,3] or [1,5]



Some Common [3,3] rearrangements:

(A) Cope Rearrangement



(B) Oxy-Cope (with OH substituent)



(C) Claisen Rearrangement (O in chain)



Example: Propose a mechanism for:



Special case:



Very Interesting Molecule:

 molecule is called Bullvalene

* After William “Bull” Doering (1917-2011)– who imagined/proposed the structure in 1961. Was actually made in 1963, proving Doering’s theory