

Organic Chemistry

59-230

Dr. Green's Class will be taught by **Dr. Phil Dutton** today.

Some animations here.

<http://www.colby.edu/chemistry>

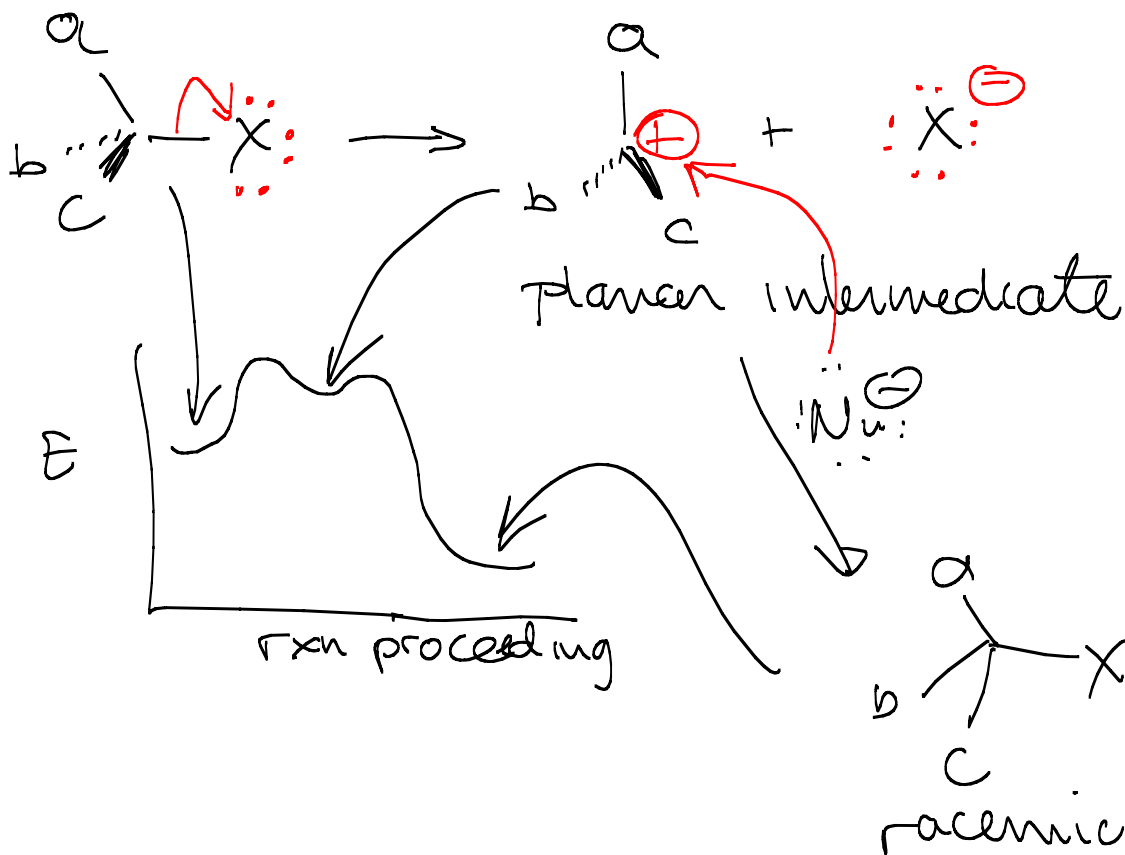
Nice one with MO's and a click drag reaction profile

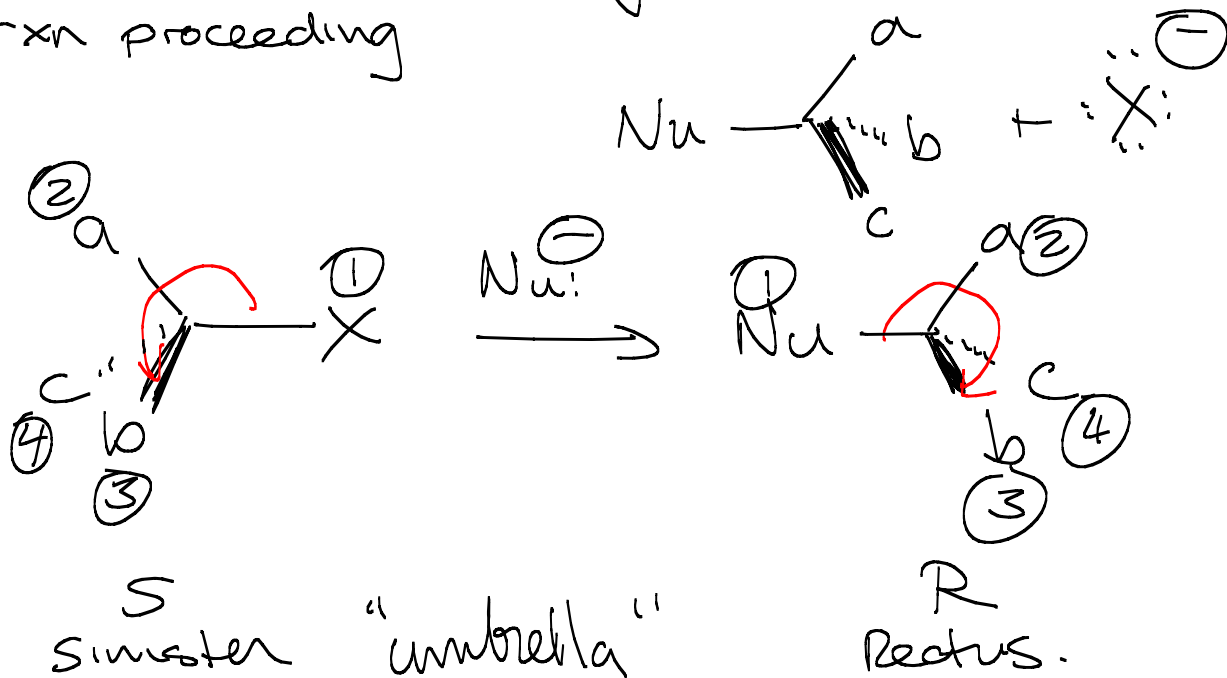
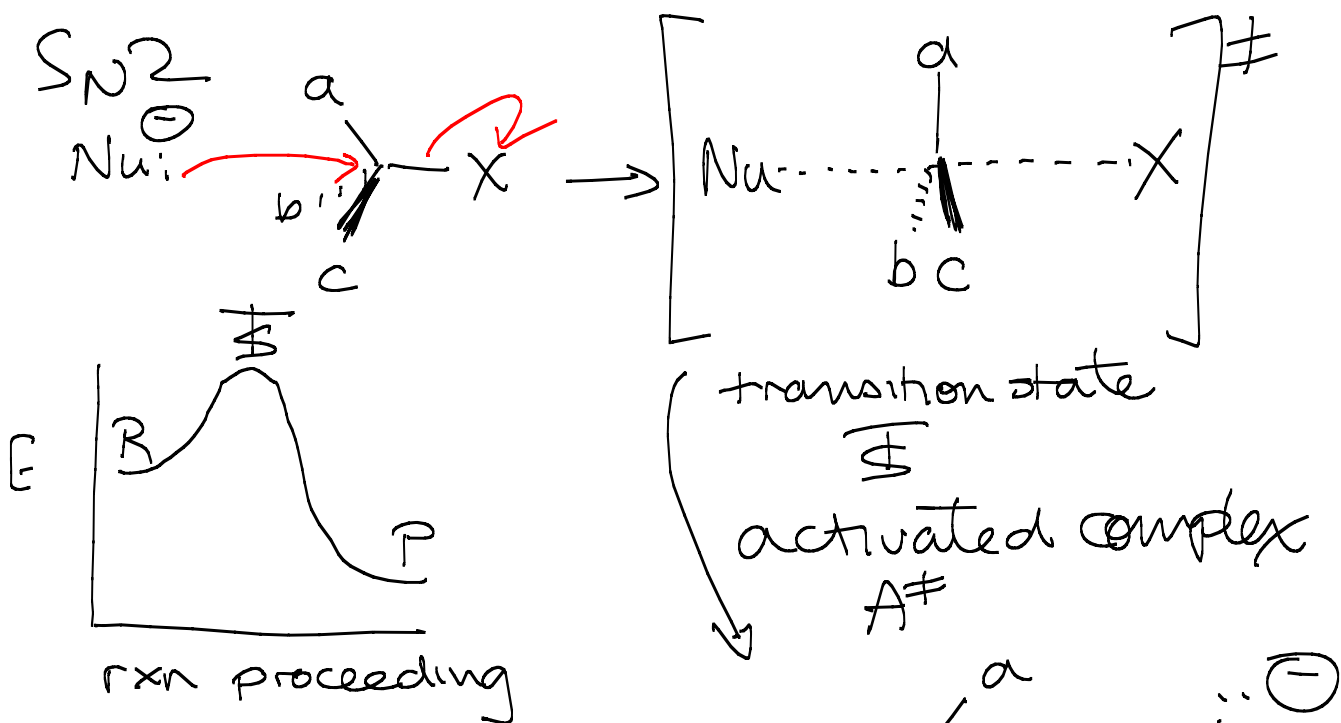
http://treefrog.fullerton.edu/chem/ORM/SN2_MO.html

Others on Treefrog

<http://treefrog.fullerton.edu>

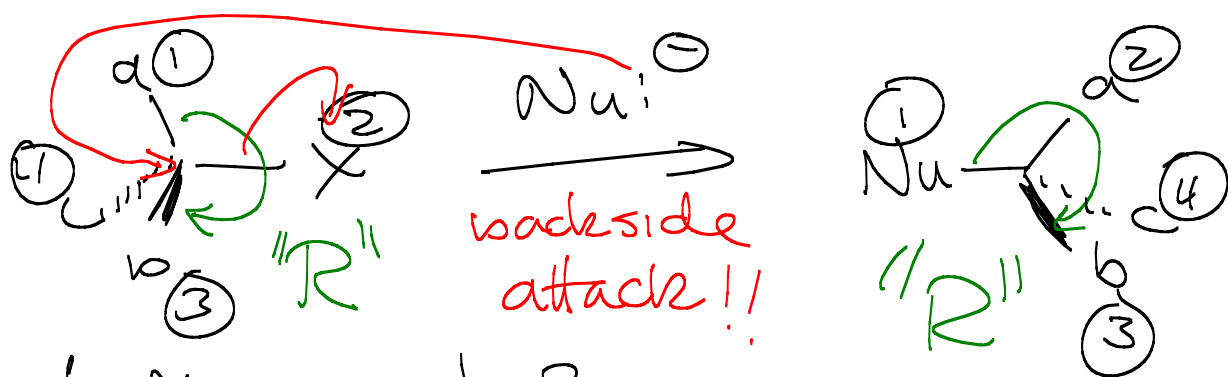
S_N1





inversion - speaks to mechanism

Walden inversion



if X is priority 2 instead of priority 1.

R configuration goes through an inversion process and gives another R config.

diastereomeric pair.

RS and RR
RS and SS

enantiomeric pairs

RS and SR
RR and SS

diastereomer S_N2

RS
↑

reacting center

what about S_N1 ?

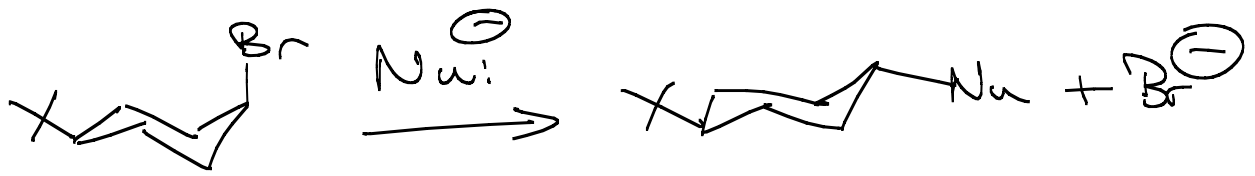
RS

↑ reacting center

S_N1

RR
OR
RS

RR } a mixture
RS } of diastereomers



big group
want to be equatorial

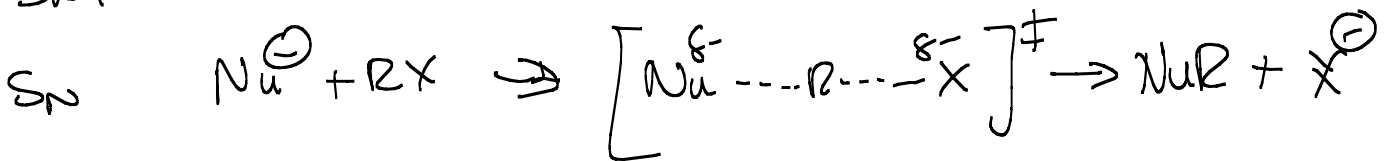
want to be equatorial

restricted conformation

axial reactant gives **ONLY** an equatorial product.

to make sure this reaction goes S_N2

- a) keep temperature low
- b) non polar solvent
- c) hot nucleophile (highly reactive)
- d) increase [Nu]
- e) poor leaving group.



Leaving groups.
recall acidity.

