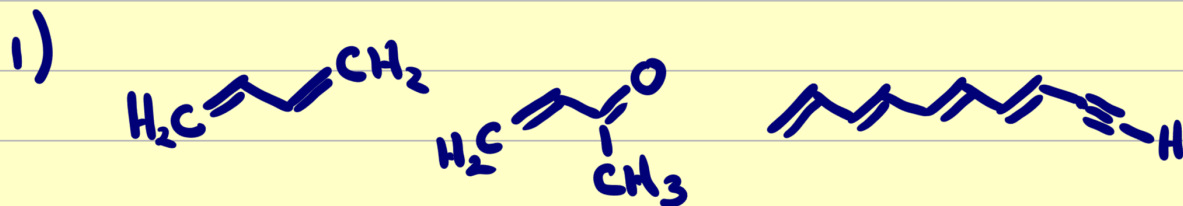
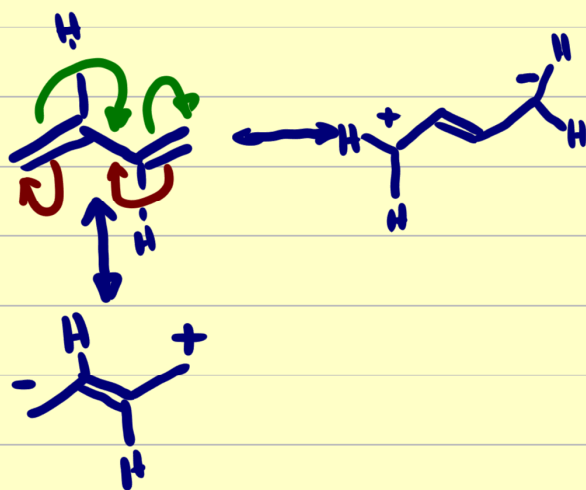


# RESONANCE FORMS

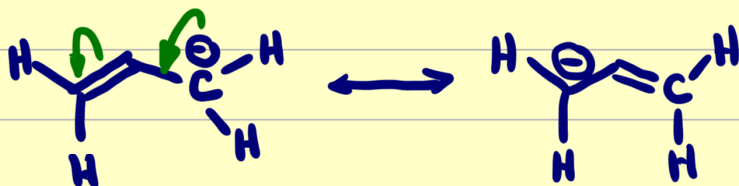
- WHEN ARE THEY DRAWN?

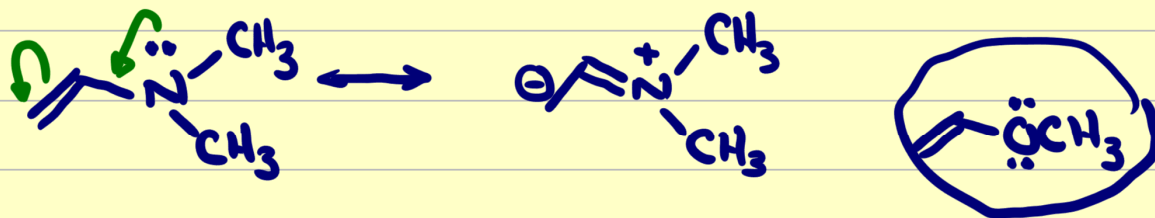


- TWO MULTIPLE BONDS SEPARATED BY A SINGLE BOND.

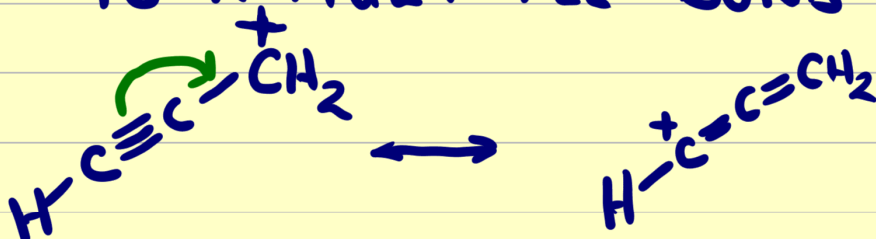


2) IF YOU HAVE A (LONE) PAIR OF ELECTRONS ON AN ATOM NEXT TO A MULTIPLE BOND

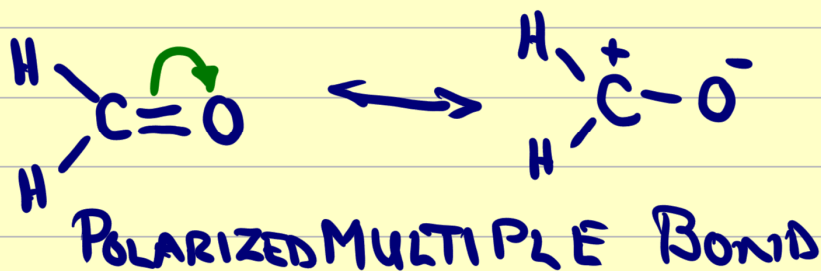
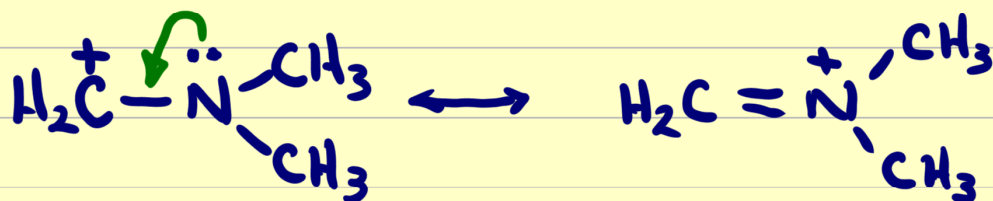




3) WHERE YOU HAVE AN ATOM WITH AN EMPTY p-ORBITAL (CATION) NEXT TO A MULTIPLE BOND



4) WHERE THERE'S A CATION IMMEDIATELY NEXT TO A LONE PAIR



# CHAPTER 5 - CHEMISTRY OF HYDROCARBONS.

ALKANES , ALKENES , ALKYNES

ALMOST  
0

A WHOLE  
LOT

A FEW  
LESS

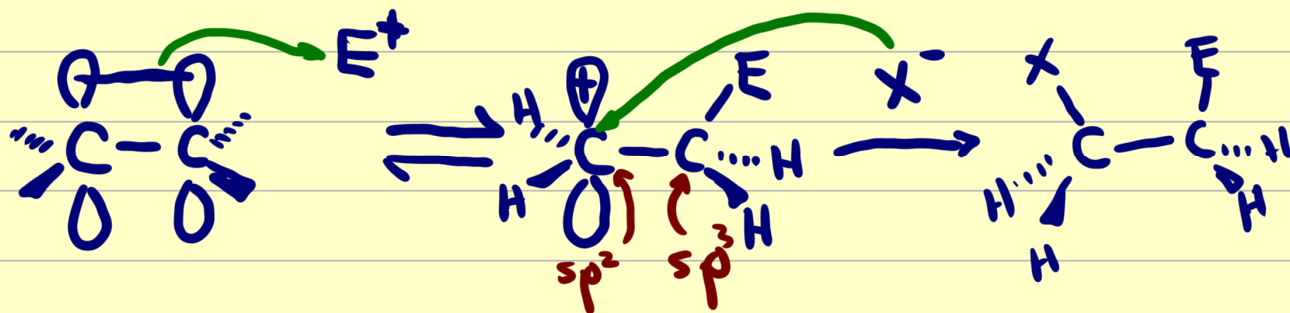
ALKENES - A BUNCH OF  $\sigma$  BOND  
AT  $\sim 84 \text{ kcal/mol}$

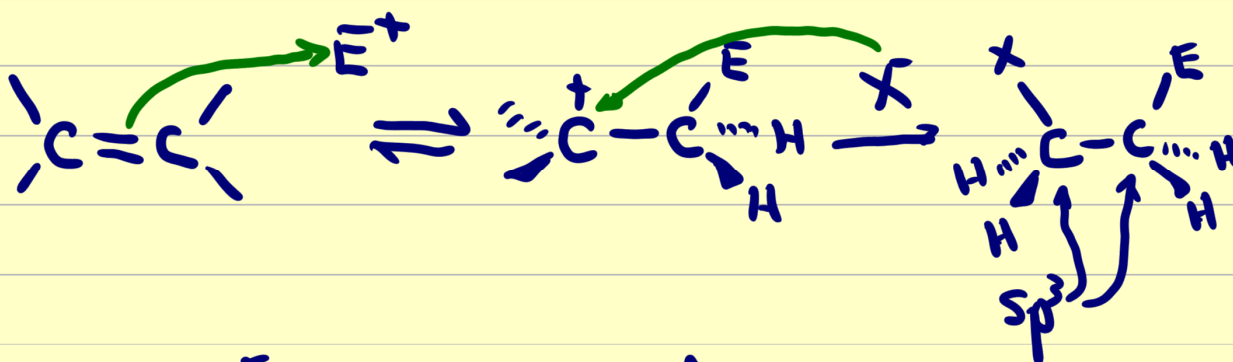
+ ONE BOND AT  $\sim 64 \text{ kcal/mol}$

$\pi$  BOND. - C'S ARE EASIER TO  
"GET AT"

- THIS MEANS "NUCLEOPHILE"

- SO LIKELY TO REACT WITH ELECTROPHILES





CALLED ELECTROPHILIC ADDITION  
REACTION

WHAT'S  $E^+ X^-$  ?

HBr HCl  $Br_2$   $Cl_2$  I-Cl  $H_2O^*$