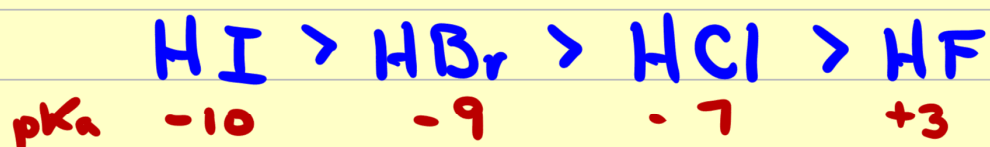


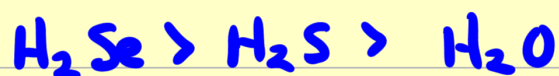
## 2. ACIDITY FOR CPDS - VIA PERIODIC TABLE.

a). WITHIN A COLUMN

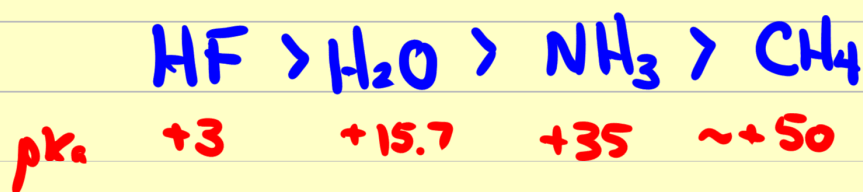


- ACIDITY INCREASES GOING DOWN COLUMN

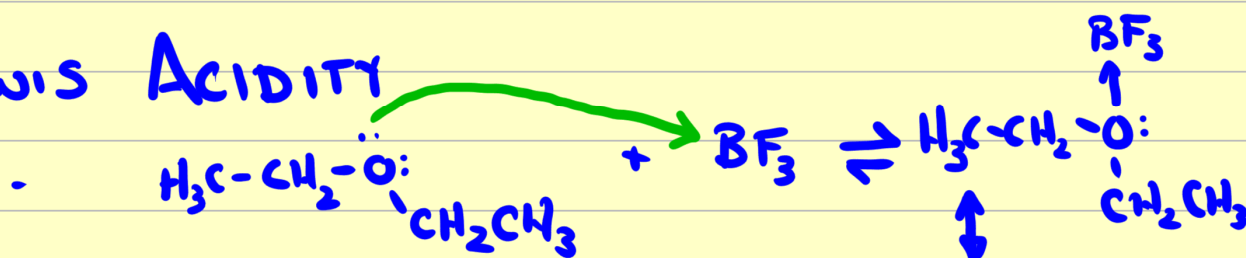
- DUE TO LARGER IONIC RADIUS IN LOWER ROWS  $\therefore$  LESS CHARGE DENSITY.

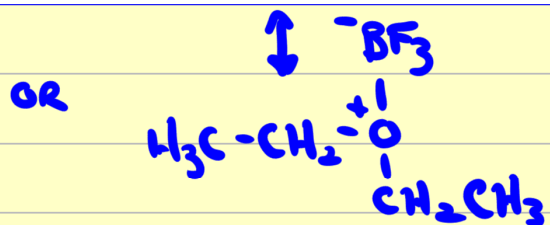


b) IN SAME ROW  
ACIDITY FOLLOWS ELECTRONEGATIVITY



LEWIS ACIDITY





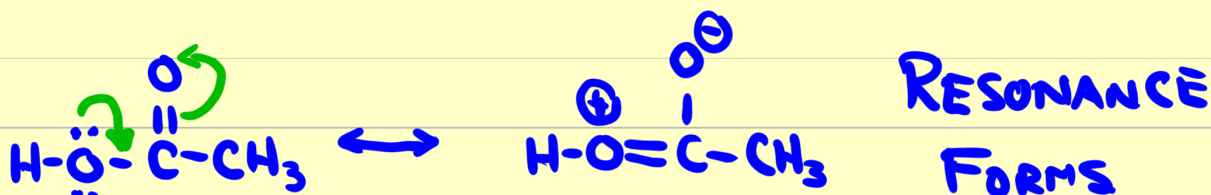
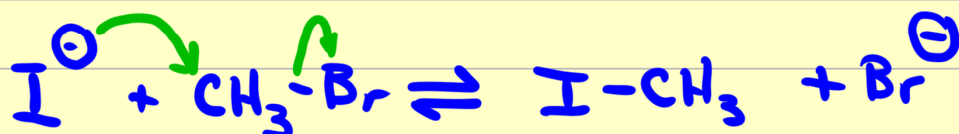
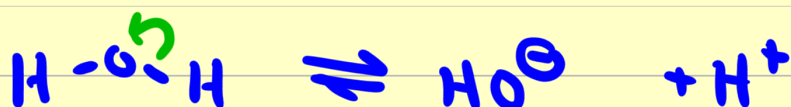
LEWIS ACID - ELECTRON PAIR  
ACCEPTOR

LEWIS BASE - ELECTRON PAIR DONOR

— THAT ARROW 

"ELECTRON PUSHING ARROW"

- DENOTES THE MOVEMENT OF AN ELECTRON PAIR FROM A REGION OF HIGH DENSITY TO A REGION OF ELECTRON DEFICIENCY

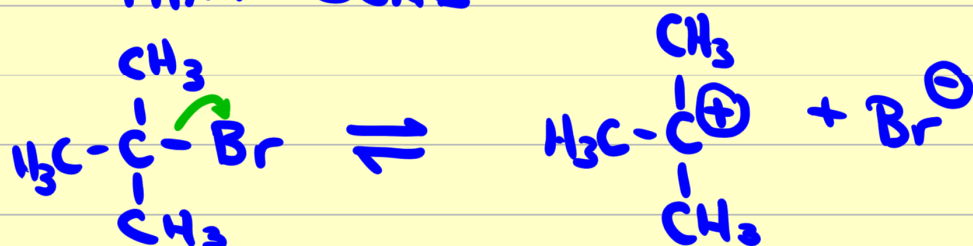


NOTES:

i) IF ELECTRONS ARE MOVING FROM A LONE PAIR, IT WILL PICK UP A "+" CHARGE

IF ELECTRONS ARE MOVING FROM AN ANION ("−"), IT WILL BECOME NEUTRAL

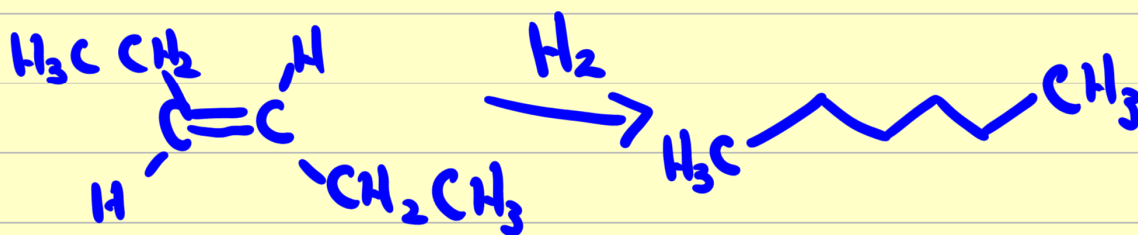
IF ELECTRONS ARE MOVING FROM A BONDED PAIR OF e<sup>−</sup>'S, YOU'LL BREAK THAT BOND



ASIDE: FOR SINGLE ELECTRON MOVEMENT,

USE 

THERMODYNAMICS VS (?) KINETICS.



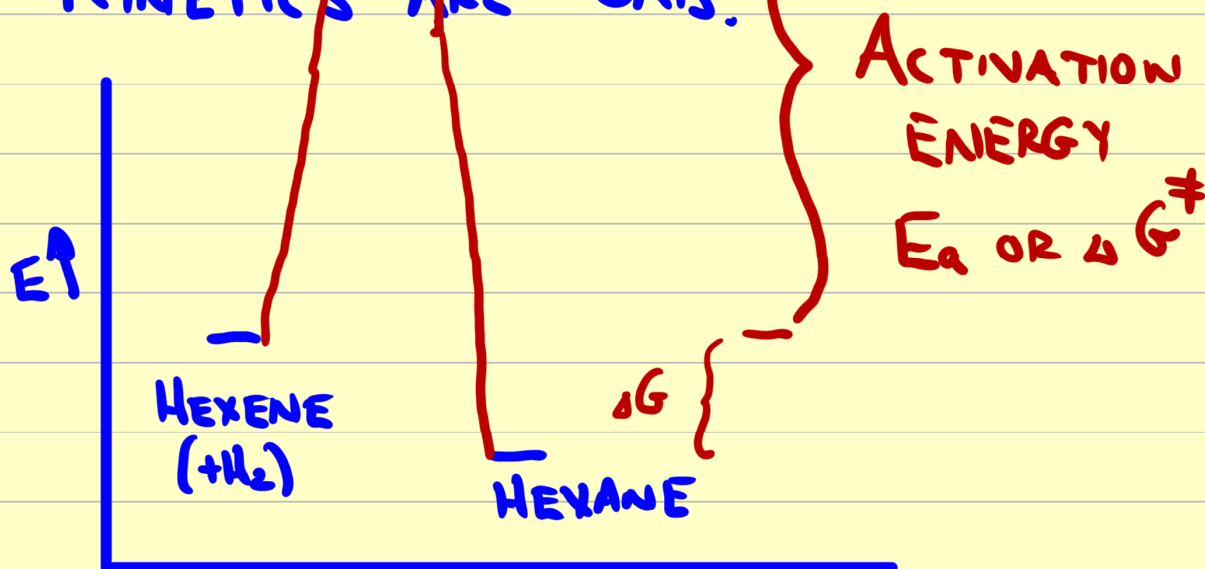
SINCE  $\Delta G < 0$   $K_{eqn} \gg 1$

$\therefore$  THE RXN GOES (TO HEXANE)

IF  $\Delta G > 0$   $K_{eqn} \ll 1$

$$(\Delta G = -RT \ln K_{eqn})$$

PROBLEM: REACTION IS WAY TOO SLOW  
KINETICS ARE BAD.



RXN COORD.

T.S. = TRANSITION STATE

TRANSITION STATE - HIGHEST ENERGY  
POINT BETWEEN STARTING MATERIALS  
AND PRODUCTS.

- CONSIDER KINETICS AND THERMODYNAMICS  
OF A RXN INDEPENDENTLY.

- ONE BEING 'GOOD' SAYS NOTHING ABOUT  
THE OTHER