F 2018

(31) $Mg + Cl_2 \rightarrow MgCl_2$ ~~1 mole~~ → ___ KJ

100g 3.917g +26.41 KJ

$$\frac{3.917\text{ g } MgCl_2}{1} \times \frac{1\text{ mole } MgCl_2}{95\text{ g } MgCl_2} = \frac{0.0411\text{ mole } MgCl_2}{26.41\text{ KJ}} :: \frac{1\text{ mole}}{x\text{ KJ}}$$

640.53 KJ

Jan 29-7:40 AM

(34) O=O

6 6

NO^-

5+1 6

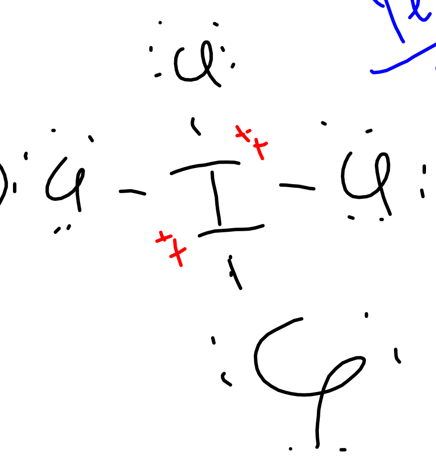
6 6

8e- b
4e- nb
12

(35) ICl_4^-

$7+4(7)+1=36$

−8
28
−24
4



Jan 29-8:15 AM

$2Mg + O_2 \rightarrow 2MgO$ (LR) *LR

0.920 g   0.321 g

Used 0.482 g

left over .437

$0.321 g\ O_2$	$1 mole\ O_2$	$2 mole\ Mg$	$24 g\ Mg$
	$32 g\ O_2$	$1 mole\ O_2$	$1 mole\ Mg$

= 0.482 g Mg used

Jan 29-8:19 AM

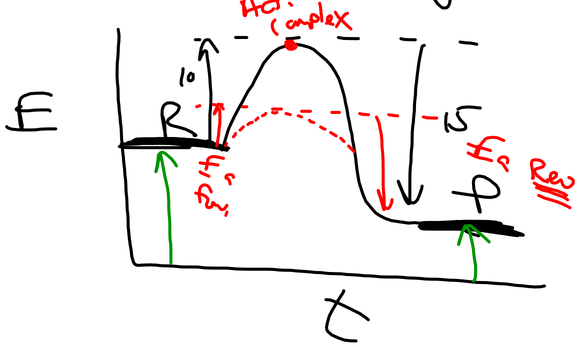
Chemical Kinetics

↳ Mains

Reactants → Products

Affect the rate of a chem rxn

① Catalyst → Lowers the E_a energy of activation



Jan 29-8:29 AM

② Temp ↑T = More collisions

Rxn = COLLISION !

③ Pressure → Mostly gases

④ Stir

⑤ Surface area → Cube
→ granulated sugar

↑SA → ↑ RATE

Jan 29-8:34 AM

⑥ Concentration, already dissolved solute in solvent.

Reactant → Products

Used up — Rate of disappearance

Produced — Rate of Appearance

concentration → $\frac{\Delta \text{Molarity}}{\Delta \text{time}}$ = RATE

Mole Ratio

Jan 29-8:39 AM

4 tires ⇒ 1 car

$$-\frac{1}{4}\frac{\Delta[\text{tires}]}{\Delta t} = +\frac{\Delta[\text{car}]}{\Delta t}$$

Jan 29-8:44 AM

$$2A + 3B \rightarrow 5C$$

$$-\frac{1}{2}\frac{\Delta[A]}{\Delta t} = -\frac{1}{3}\frac{\Delta[B]}{\Delta t} = +\frac{1}{5}\frac{\Delta[C]}{\Delta t}$$

Jan 29-8:45 AM