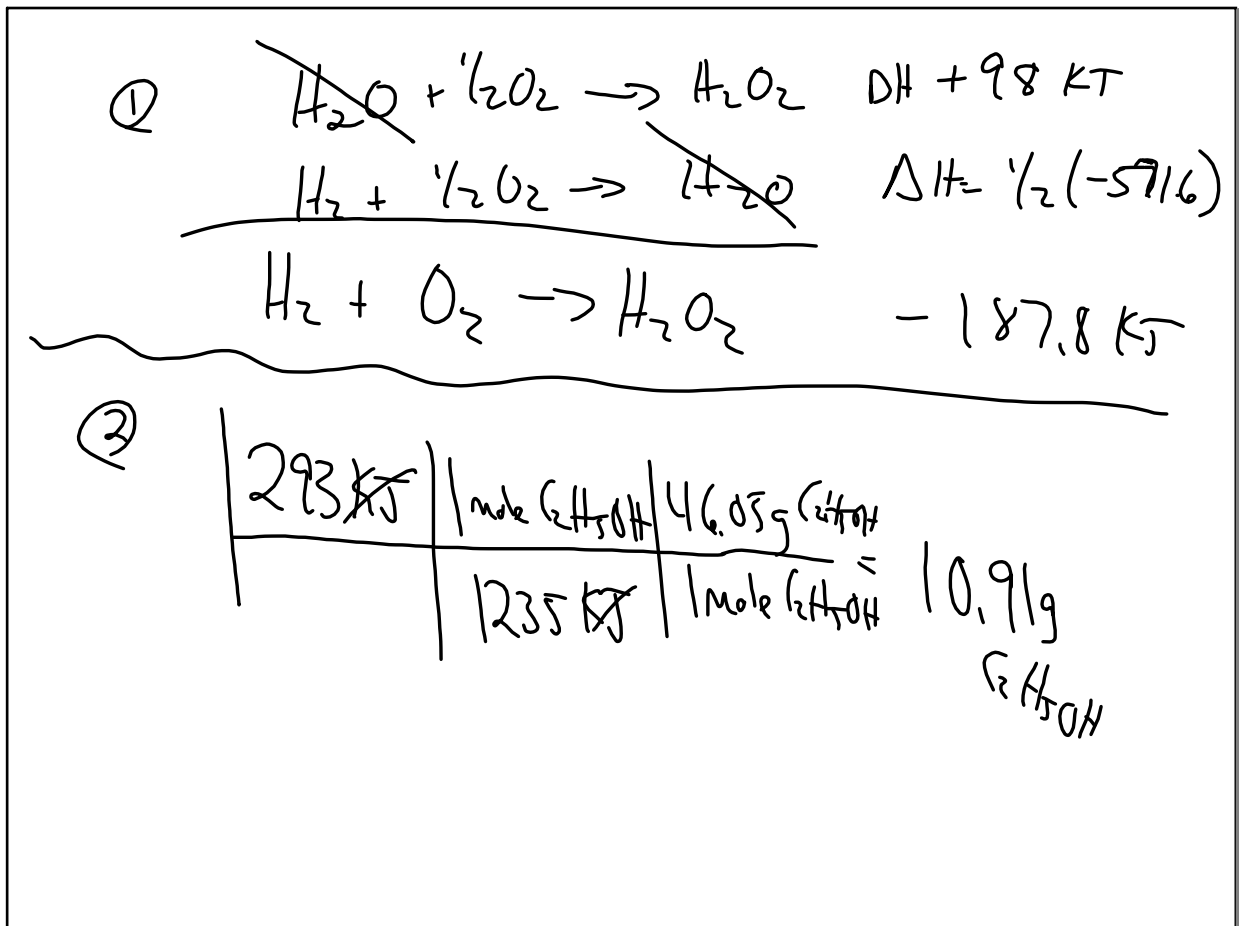


Nov 24-8:12 AM



Nov 24-8:18 AM

③ $\frac{1}{4} \text{P}_4\text{O}_{10}$ $\xrightarrow{\times 4}$ $\text{1 mole P}_4\text{O}_{10}$ $\xrightarrow{\times 4}$ -113.2
 $\xrightarrow{\times 4}$ -452.8 kJ

④ $\Delta H_{\text{rxn}} = n \sum \Delta H_{\text{prod}} - n \sum \Delta H_{\text{react}}$
 $= [2(\text{KCl}) + \text{Mg}] - [2(\text{K}) + \text{MgCl}_2]$
 $[2(-435.9) + 0] - [2(0) + -641.6]$
 -230.2 kJ

Nov 24-8:23 AM

⑤ $\frac{0.38 \text{ J}}{\text{g} \cdot ^\circ\text{C}}$ 75 g $\frac{\text{absorb}}{150 \text{ J}}$
 $\text{Find } \Delta T \text{ } ^\circ\text{C}$

$\frac{\text{g} \cdot ^\circ\text{C}}{0.38 \text{ J}} \mid \frac{150 \text{ J}}{75 \text{ g}} = 5.26 \text{ } ^\circ\text{C}$
 ΔT

$25 + 5.26 = 30.26 \text{ } ^\circ\text{C}$ T_f

Nov 24-8:25 AM

⑥ $n=4$ $l=4$ MAX
($n-1$) M
 $-l+1$ S

s	p	d	f
0	1	2	3

\uparrow

III

$l=0$ $m=0$

Nov 24-8:27 AM

⑦

2.255	$100g$	$= \frac{225 J}{\text{mole } ^\circ C}$
$g \times ^\circ C$	1 mole	

⑧ $c = f \lambda$

$3 \times 10^8 = f (280 \times 10^{-9} \text{ m})$

$f = 1.07 \times 10^{15} \text{ s}^{-1}$

Nov 24-8:28 AM

(10) $\lambda = 451 \text{ nm}$ Find E

$E = hf$ $c = f\lambda$

$f = \frac{c}{\lambda}$

$$E = \frac{hc}{\lambda} = \frac{(6.61 \times 10^{-34}) (3 \times 10^8)}{451 \times 10^{-9}}$$

$= 4.41 \times 10^{-19} \text{ J}$

Nov 24-8:30 AM

(11) Al

AT# = 13 $13e^-$

3 valence

$10e^-$ core

(12) $E = R_H \left(\frac{1}{n_i^2} - \frac{1}{n_f^2} \right)$

$$= 2.18 \times 10^{-18} \left(\frac{1}{5^2} - \frac{1}{2^2} \right) = \text{4.578} \times 10^{-19} \text{ J}$$

Nov 24-8:32 AM

(15) Transition - Filling the d sublevel



(21) Element elemental form

Nov 24-8:34 AM

$$\underline{E}c2 \quad \lambda = \frac{h}{mv} = \frac{6.63 \times 10^{-34}}{145 \times 10^{-3} (30)}$$

$$1.52 \times 10^{-34} \text{ m}$$

Nov 24-8:38 AM

FCl
Water
(C)

$$M_C \Delta T = M_i \dot{C} \Delta T$$

$$(50)(4.18)(T_F - 20) = 100(0.448)(100 - T_F)$$

$$209(T_F - 20) = 44.8(100 - T_F)$$

$$209T_F - 4180 = 4480 - 44.8T_F$$

$$253.8T_F = 8660$$

$T_F = 34.91\%$

Nov 24-8:39 AM

Bonding → TO Become STABLE

Ionic

M lose e⁻

NM gain e⁻

) Transfer
one e⁻

Covalent

Bunch NM's

SHARE use e⁻

Polar ≠ sharing

Non polar = sharing

8 val e⁻ → FULL PER

Nov 24-8:45 AM