

# Reaction Enthalpies

$$\Delta H_r = nH_r$$

- Communicating Enthalpy Changes  
( $\Delta H_r$  notation, balanced equation, potential energy diagrams)

- Hess' Law

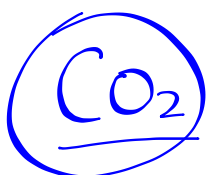
$$\Delta H_r = \sum nH_{fp} - \sum nH_{fr}$$

- Enthalpy Changes using Formation Reactions

- Reference Energy State  $E_p(O_2) = 0 \text{ kJ/mol}$

- Thermal Stability

- Multi-Step Energy Calculations



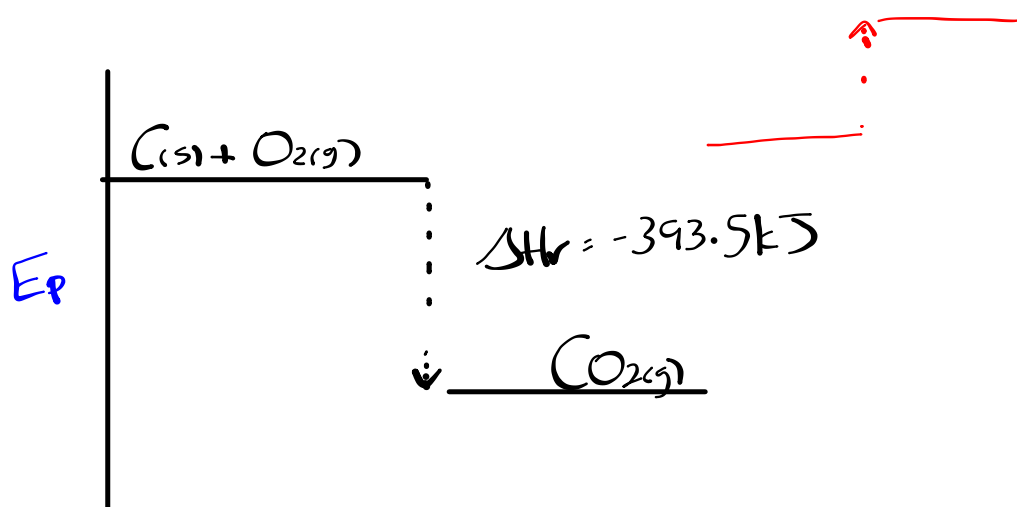
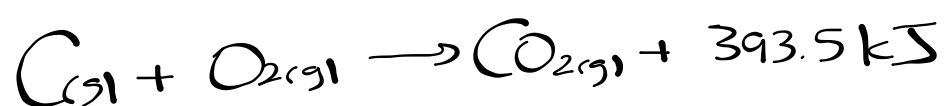
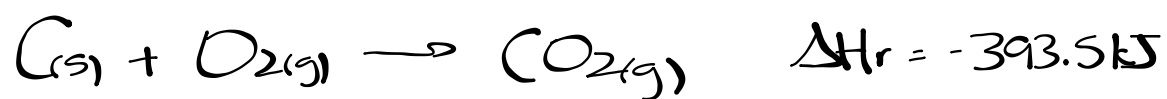
$$H_{\text{SD}} = 393.5 \text{ kJ/mol}$$

$$H_{\text{f}} = -393.5 \text{ kJ/mol}$$



$$H_{\text{SD}} = 285.8 \text{ kJ/mol}$$

$$H_{\text{f}} = -285.8 \text{ kJ/mol}$$



# Review Worksheet