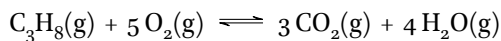


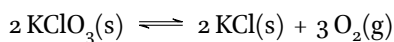
Selection of Chemical Reactions for Use in Practice Problems

Prepared by Dr. Matthew Rowley, March 29, 2024

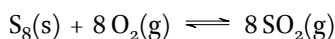
Unless stated otherwise, all values are at $T = 298K$



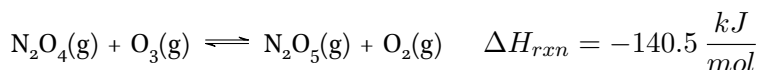
$$\Delta H_{rxn}^{\circ} = -2044 \frac{kJ}{mol} \quad \left| \quad \right|$$



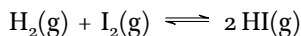
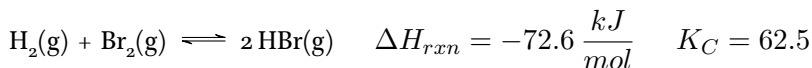
$$\Delta H_{rxn}^{\circ} = -77.6 \frac{kJ}{mol} \quad \left| \quad \Delta S_{rxn}^{\circ} = 494.6 \frac{J}{mol K} \quad \right| \quad \Delta G_{rxn}^{\circ} = -225 \frac{kJ}{mol} \quad \left| \quad K = 2.76 \times 10^{39} \right.$$



$$\Delta H_{rxn}^{\circ} = -2,374 \frac{kJ}{mol} \quad \left| \quad \Delta S_{rxn}^{\circ} = 312.2 \frac{J}{mol K} \quad \right| \quad \Delta G_{rxn}^{\circ} = -2,467 \frac{kJ}{mol} \quad \left| \quad K = 2.76 \times 10^{432} \right.$$



$$\Delta H_{rxn}^{\circ} = 87.9 \frac{kJ}{mol} \quad \left| \quad \Delta S_{rxn}^{\circ} = 170.2 \frac{J}{mol K} \quad \right| \quad \Delta G_{rxn}^{\circ} = 37.2 \frac{kJ}{mol} \quad \left| \quad K = 3.01 \times 10^{-7} \right.$$



$$\Delta H_{rxn}^{\circ} = -9.4 \frac{kJ}{mol} \quad \left| \quad \Delta S_{rxn}^{\circ} = 21.8 \frac{J}{mol K} \quad \right| \quad \Delta G_{rxn}^{\circ} = -15.9 \frac{kJ}{mol} \quad \left| \quad K = 613 \right.$$

