

Answer on Question #59747, Chemistry / General Chemistry

Explain the effect on equilibrium of the formation of HI from H₂ reaction with I₂ by

Increasing temperature

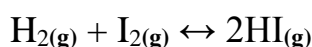
Increasing pressure by decreasing the volume

Decreasing concentration of hydrogen

Increasing the concentration of iodine

Adding a catalyst

Increasing temperature



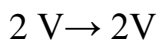
endothermic reaction, $\Delta H > 0$

With increasing temperature, the equilibrium shifts to the side of the endothermic reaction

the equilibrium shifts to the **right** (→)

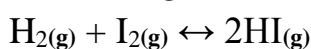
Pressures of gases are increased

when the pressure increases, the equilibrium shifts toward smaller volume



It does not affect the equilibrium displacement

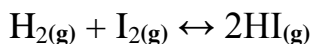
Decreasing concentration of hydrogen



$$v = k \cdot [\text{H}_2] \cdot [\text{I}_2]$$

the equilibrium shifts to the **left** (←)

Increasing the concentration of iodine



$$v = k \cdot [\text{H}_2] \cdot [\text{I}_2]$$

the equilibrium shifts to the **right** (→)

Adding a catalyst

It does not affect the equilibrium displacement