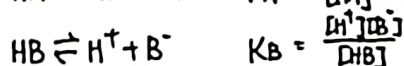
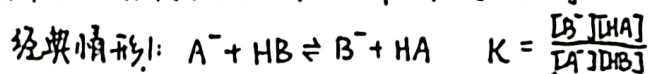


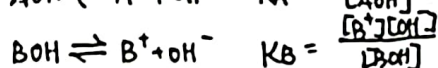
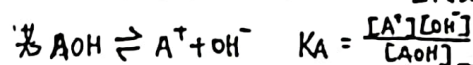
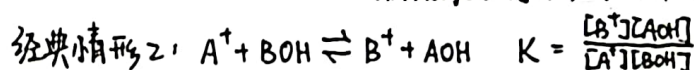
"这个世界是强者的世界。" —— 白老师

对水溶液中的平衡, 此言体现于两点:

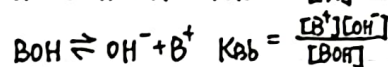
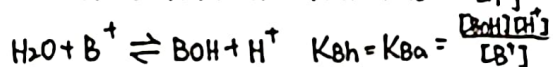
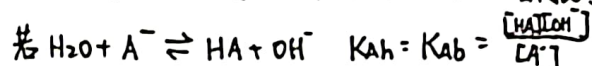
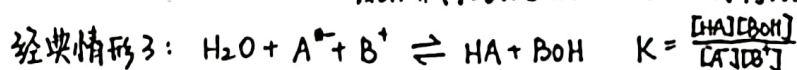
### I. 强酸(碱)制弱酸(碱) (单-平衡且电荷数相同)



$$K = \frac{K_B}{K_A}, \begin{cases} HB \text{ 酸性强于 } HA, K > 1 \text{ (强制弱)} \\ HA \text{ 酸性强于 } HB, K < 1 \text{ (弱制强)} \end{cases}$$



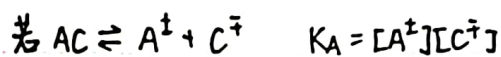
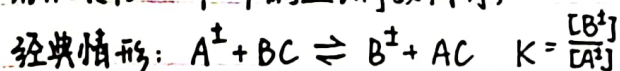
$$K = \frac{K_B}{K_A}, \begin{cases} BOH \text{ 碱性强于 } AOH, K > 1 \text{ (强制弱)} \\ AOH \text{ 碱性强于 } BOH, K < 1 \text{ (弱制强)} \end{cases}$$



$$K_a = \frac{K_{Ba}}{K_{Aa}}, \begin{cases} B^+ \text{ 酸性强于 } HA, K > 1 \text{ (强制弱) (互促水解)} \\ HA \text{ 酸性强于 } B^+, K < 1 \text{ (弱制强) (中和反应)} \end{cases}$$

$$K_b = \frac{K_{Ab}}{K_{Bb}}, \begin{cases} A^- \text{ 碱性强于 } BOH, K > 1 \text{ (强制弱) (互促水解)} \\ BOH \text{ 碱性强于 } A^-, K < 1 \text{ (弱制强) (中和反应)} \end{cases}$$

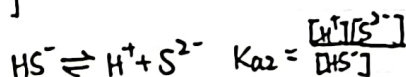
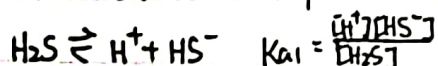
### II. 沉淀转化 (单-平衡且电荷数相同)



$$K = \frac{K_B}{K_A} \begin{cases} AC \text{ 较 } BC \text{ 易沉淀}, K > 1 \text{ (强制弱)} \\ BC \text{ 较 } AC \text{ 易沉淀}, K < 1 \text{ (弱制强)} \end{cases}$$

### III. 复合情形: 综合考虑酸碱平衡、溶解平衡。

"抓主要矛盾!" —— 白老师



$$K = \frac{K_{a1}K_{a2}}{K_{sp}} \quad H_2S \text{ 电离易于 } CuS \text{ 溶解}, K > 1.$$