

超级判断题之离子方程式正误判断

2018 ~ 2025 浙江真题 + 2023.8 ~ 2025.5 选考模拟题

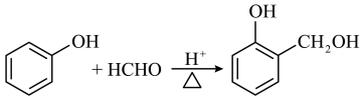
错误标黄，真题标★

【下列方程式正确的画√，错误的画×，方程式中出现离子，该拆的物质没拆算错】

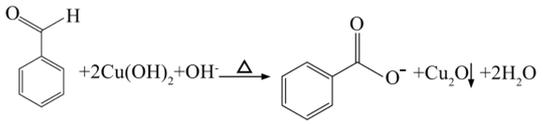
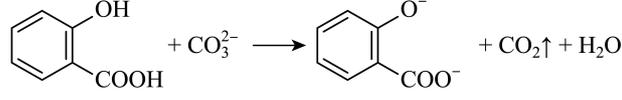
五看：①是否符合客观事实②反应是否书写完整③是否符合拆写规则④是否符合量的关系⑤是否反应到最终状态

- 1 (×)★大理石与醋酸反应： $\text{CO}_3^{2-} + 2\text{CH}_3\text{COOH} = 2\text{CH}_3\text{COO}^- + \text{H}_2\text{O} + \text{CO}_2 \uparrow$
- 2 (×)★高锰酸钾与浓盐酸制氯气的反应： $\text{MnO}_4^- + 4\text{Cl}^- + 8\text{H}^+ = \text{Mn}^{2+} + 2\text{Cl}_2 \uparrow + 4\text{H}_2\text{O}$
- 3 (√)★氢氧化钠溶液与过量的碳酸氢钙溶液反应： $\text{OH}^- + \text{Ca}^{2+} + \text{HCO}_3^- = \text{CaCO}_3 \downarrow + \text{H}_2\text{O}$
- 4 (×)★漂白粉溶液吸收少量二氧化硫气体： $\text{SO}_2 + \text{H}_2\text{O} + \text{ClO}^- = \text{SO}_4^{2-} + \text{Cl}^- + 2\text{H}^+$
- 5 (√)★KI 溶液久置空气中变黄色： $4\text{I}^- + \text{O}_2 + 2\text{H}_2\text{O} = 2\text{I}_2 + 4\text{OH}^-$
- 6 (×)★少量二氧化硫与氨水反应： $\text{SO}_2 + \text{NH}_3 \cdot \text{H}_2\text{O} = \text{NH}_4^+ + \text{HSO}_3^-$
- 7 (×)★Na 与 CuSO_4 水溶液反应： $2\text{Na} + \text{Cu}^{2+} = \text{Cu} + 2\text{Na}^+$
- 8 (√)★锌溶于氢氧化钠溶液： $\text{Zn} + 2\text{OH}^- + 2\text{H}_2\text{O} = [\text{Zn}(\text{OH})_4]^{2-} + \text{H}_2 \uparrow$
- 9 (√)★亚硝酸钠与氯化铵溶液受热反应： $\text{NO}_2^- + \text{NH}_4^+ \xrightarrow{\Delta} \text{N}_2 \uparrow + 2\text{H}_2\text{O}$
- 10 (×)★等浓度的 $(\text{NH}_4)_2\text{SO}_4$ 和 FeSO_4 混合溶液与足量 NaOH 反应： $\text{Fe}^{2+} + 2\text{OH}^- = \text{Fe}(\text{OH})_2 \downarrow$
- 11 (√)★二氧化硫与酸性高锰酸钾溶液反应： $5\text{SO}_2 + 2\text{H}_2\text{O} + 2\text{MnO}_4^- = 2\text{Mn}^{2+} + 5\text{SO}_4^{2-} + 4\text{H}^+$
- 12 (√)★酸性碘化钾溶液中滴加适量双氧水： $2\text{I}^- + 2\text{H}^+ + \text{H}_2\text{O}_2 = \text{I}_2 + 2\text{H}_2\text{O}$
- 13 (×)★硫酸铜溶液中加少量的铁粉： $3\text{Cu}^{2+} + 2\text{Fe} = 2\text{Fe}^{3+} + 3\text{Cu}$
- 14 (√)★硅酸钠溶液和盐酸反应： $\text{SiO}_3^{2-} + 2\text{H}^+ = \text{H}_2\text{SiO}_3 \downarrow$
- 15 (×)★ $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2$ 溶液与少量 $\text{Ba}(\text{OH})_2$ 溶液反应： $\text{SO}_4^{2-} + \text{Ba}^{2+} = \text{BaSO}_4 \downarrow$
- 16 (×)★电解 MgCl_2 水溶液： $2\text{Cl}^- + 2\text{H}_2\text{O} \xrightarrow{\text{通电}} 2\text{OH}^- + \text{Cl}_2 \uparrow + \text{H}_2 \uparrow$
- 17 (√)★乙酸乙酯与 NaOH 溶液共热： $\text{CH}_3\text{COOCH}_2\text{CH}_3 + \text{OH}^- \xrightarrow{\Delta} \text{CH}_3\text{COO}^- + \text{CH}_3\text{CH}_2\text{OH}$
- 18 (×)★ CuSO_4 溶液中滴加稀氨水： $\text{Cu}^{2+} + 2\text{OH}^- = \text{Cu}(\text{OH})_2 \downarrow$
- 19 (√)★ BaCO_3 溶于盐酸： $\text{BaCO}_3 + 2\text{H}^+ = \text{Ba}^{2+} + \text{CO}_2 \uparrow + \text{H}_2\text{O}$
- 20 (√)★ FeCl_3 溶液腐蚀铜板： $2\text{Fe}^{3+} + \text{Cu} = 2\text{Fe}^{2+} + \text{Cu}^{2+}$
- 21 (×)★苯酚钠溶液中通入少量 CO_2 ： $2\text{C}_6\text{H}_5\text{O}^- + \text{CO}_2 + \text{H}_2\text{O} \rightarrow 2\text{C}_6\text{H}_5\text{OH} + \text{CO}_3^{2-}$
- 22 (√)★醋酸钠水解： $\text{CH}_3\text{COO}^- + \text{H}_2\text{O} \rightleftharpoons \text{CH}_3\text{COOH} + \text{OH}^-$
- 23 (×)★石灰石与醋酸反应： $\text{CO}_3^{2-} + 2\text{CH}_3\text{COOH} = \text{CH}_3\text{COO}^- + \text{CO}_2 \uparrow + \text{H}_2\text{O}$
- 24 (√)★铜片上电镀银的总反应（银作阳极，硝酸银溶液作电镀液）： $\text{Ag}(\text{阳极}) \xrightarrow{\text{通电}} \text{Ag}(\text{阴极})$
- 25 (√)★铜与稀硝酸反应： $3\text{Cu} + 2\text{NO}_3^- + 8\text{H}^+ = 3\text{Cu}^{2+} + 2\text{NO} \uparrow + 4\text{H}_2\text{O}$
- 26 (√)★明矾溶液中加入少量氢氧化钡溶液： $2\text{Al}^{3+} + 3\text{SO}_4^{2-} + 3\text{Ba}^{2+} + 6\text{OH}^- = 2\text{Al}(\text{OH})_3 \downarrow + 3\text{BaSO}_4 \downarrow$
- 27 (×)★碳酸镁与稀盐酸反应： $\text{CO}_3^{2-} + 2\text{H}^+ = \text{CO}_2 \uparrow + \text{H}_2\text{O}$
- 28 (√)★亚硫酸氢钠的水解： $\text{HSO}_3^- + \text{H}_2\text{O} \rightleftharpoons \text{H}_2\text{SO}_3 + \text{OH}^-$

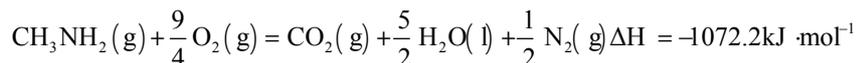
- 29 (✓) *将碳酸氢钙溶液与过量的澄清石灰水混合: $\text{HCO}_3^- + \text{Ca}^{2+} + \text{OH}^- = \text{CaCO}_3 \downarrow + \text{H}_2\text{O}$
- 30 (✓) *将少量 NO_2 通入 NaOH 溶液: $2\text{NO}_2 + 2\text{OH}^- = \text{NO}_3^- + \text{NO}_2^- + \text{H}_2\text{O}$
- 31 (✗) *将少量 SO_2 通入 NaClO 溶液: $\text{SO}_2 + \text{H}_2\text{O} + 2\text{ClO}^- = \text{SO}_3^{2-} + 2\text{HClO}$
- 32 (✓) *向氨水中滴入少量硝酸银溶液: $\text{Ag}^+ + 2\text{NH}_3 \cdot \text{H}_2\text{O} = \text{Ag}(\text{NH}_3)_2^+ + 2\text{H}_2\text{O}$
- 33 (✓) *盐酸中滴加 Na_2SiO_3 溶液: $\text{SiO}_3^{2-} + 2\text{H}^+ = \text{H}_2\text{SiO}_3 \downarrow$
- 34 (✗) *碘化亚铁溶液与等物质的量的氯气: $2\text{Fe}^{2+} + 2\text{I}^- + 2\text{Cl}_2 = 2\text{Fe}^{3+} + \text{I}_2 + 4\text{Cl}^-$
- 35 (✓) * Na_2CO_3 溶液中通入过量 SO_2 : $\text{CO}_3^{2-} + 2\text{SO}_2 + \text{H}_2\text{O} = 2\text{HSO}_3^- + \text{CO}_2$
- 36 (✓) *乙醇与 $\text{K}_2\text{Cr}_2\text{O}_7$ 酸性溶液反应: $3\text{CH}_3\text{CH}_2\text{OH} + 2\text{Cr}_2\text{O}_7^{2-} + 16\text{H}^+ \rightarrow 3\text{CH}_3\text{COOH} + 4\text{Cr}^{3+} + 11\text{H}_2\text{O}$
- 37 (✗) *溴与冷的 NaOH 溶液反应: $\text{Br}_2 + \text{OH}^- = \text{Br}^- + \text{BrO}^- + \text{H}^+$
- 38 (✓) * Cl_2 通入氢氧化钠溶液: $\text{Cl}_2 + 2\text{OH}^- = \text{Cl}^- + \text{ClO}^- + \text{H}_2\text{O}$
- 39 (✓) *氧化铝溶于氢氧化钠溶液: $\text{Al}_2\text{O}_3 + 2\text{OH}^- = 2\text{AlO}_2^- + \text{H}_2\text{O}$
- 40 (✓) *过量 CO_2 通入饱和碳酸钠溶液: $2\text{Na}^+ + \text{CO}_3^{2-} + \text{CO}_2 + \text{H}_2\text{O} = 2\text{NaHCO}_3 \downarrow$
- 41 (✗) * H_2SO_3 溶液中滴入氯化钙溶液: $\text{SO}_3^{2-} + \text{Ca}^{2+} = \text{CaSO}_3 \downarrow$
- 42 (✓) *向次氯酸钙溶液通入足量二氧化碳: $\text{ClO}^- + \text{CO}_2 + \text{H}_2\text{O} = \text{HClO} + \text{HCO}_3^-$
- 43 (✗) *向硫化钠溶液通入足量二氧化硫: $\text{S}^{2-} + 2\text{SO}_2 + 2\text{H}_2\text{O} = \text{H}_2\text{S} + 2\text{HSO}_3^-$
- 44 (✓) *黑火药爆炸: $\text{S} + 2\text{KNO}_3 + 3\text{C} \xrightarrow{\text{点燃}} \text{K}_2\text{S} + \text{N}_2 \uparrow + 3\text{CO}_2 \uparrow$
- 45 (✓) *四氯化钛水解: $\text{TiCl}_4 + (\text{x} + 2)\text{H}_2\text{O} \triangleq \text{TiO}_2 \cdot \text{xH}_2\text{O} \downarrow + 4\text{HCl}$
- 46 (✗) *硫化钠溶液在空气中氧化变质: $2\text{S}^{2-} + \text{O}_2 + 4\text{H}^+ = 2\text{S} \downarrow + 2\text{H}_2\text{O}$
- 47 (✓) *硬脂酸甘油酯在 NaOH 溶液中皂化:
$$\begin{array}{c} \text{CH}_2\text{OOC}_{17}\text{H}_{35} \\ | \\ \text{CHOOC}_{17}\text{H}_{35} \\ | \\ \text{CH}_2\text{OOC}_{17}\text{H}_{35} \end{array} + 3\text{NaOH} \xrightarrow{\Delta} \begin{array}{c} \text{CH}_2\text{-OH} \\ | \\ \text{CH-OH} \\ | \\ \text{CH}_2\text{-OH} \end{array} + 3\text{C}_{17}\text{H}_{35}\text{COONa}$$
- 48 (✗) *用 CuSO_4 溶液除 H_2S 气体: $\text{Cu}^{2+} + \text{S}^{2-} = \text{CuS} \downarrow$
- 49 (✗) * H_2SO_3 溶液中滴加 $\text{Ba}(\text{NO}_3)_2$ 溶液: $\text{H}_2\text{SO}_3 + \text{Ba}^{2+} = \text{BaSO}_3 \downarrow + 2\text{H}^+$
- 50 (✗) * NaHCO_3 溶液中通入少量 Cl_2 : $2\text{HCO}_3^- + \text{Cl}_2 = 2\text{CO}_2 + \text{Cl}^- + \text{ClO}^- + \text{H}_2\text{O}$
- 51 (✓) * MnO_2 与浓盐酸反应: $\text{MnO}_2 + 4\text{H}^+ + 2\text{Cl}^- \xrightarrow{\Delta} \text{Mn}^{2+} + \text{Cl}_2 \uparrow + 2\text{H}_2\text{O}$
- 52 (✓) * NO_2 与 H_2O 反应: $3\text{NO}_2 + \text{H}_2\text{O} = 2\text{H}^+ + 2\text{NO}_3^- + \text{NO}$
- 53 (✓) *将少量灼热的 CuO : $\text{CH}_3\text{CH}_2\text{OH} + \text{CuO} \xrightarrow{\Delta} \text{CH}_3\text{CHO} + \text{Cu} + \text{H}_2\text{O}$
- 54 (✗) *将 SO_2 通入酸性 KMnO_4 溶液: $5\text{SO}_2 + 2\text{MnO}_4^- + 4\text{H}^+ = 5\text{SO}_4^{2-} + 2\text{Mn}^{2+} + 2\text{H}_2\text{O}$
- 55 (✓) 碳酸氢镁溶液中加入过量的澄清石灰水:
 $\text{Mg}^{2+} + 2\text{HCO}_3^- + 2\text{Ca}^{2+} + 4\text{OH}^- = \text{Mg}(\text{OH})_2 \downarrow + 2\text{CaCO}_3 \downarrow + 2\text{H}_2\text{O}$
- 56 (✗) $\text{Na}_2\text{S}_2\text{O}_3$ 溶液与稀硝酸溶液混合: $\text{S}_2\text{O}_3^{2-} + 2\text{H}^+ = \text{S} \downarrow + \text{SO}_2 \uparrow + \text{H}_2\text{O}$
- 57 (✗) 向银氨溶液中滴加足量的盐酸: $[\text{Ag}(\text{NH}_3)_2]^+ + \text{OH}^- + 3\text{H}^+ = \text{Ag}^+ + 2\text{NH}_4^+ + \text{H}_2\text{O}$
- 58 (✓) 氨的氯化钠饱和溶液中通入足量 CO_2 : $\text{Na}^+ + \text{NH}_3 + \text{H}_2\text{O} + \text{CO}_2 = \text{NaHCO}_3 \downarrow + \text{NH}_4^+$
- 59 (✗) 工业上制备漂白粉: $\text{Cl}_2 + 2\text{OH}^- = \text{Cl}^- + \text{ClO}^- + \text{H}_2\text{O}$

- 60 (×) 用氢氧化钠溶液吸收二氧化氮: $3\text{NO}_2 + 2\text{OH}^- = 2\text{NO}_3^- + \text{NO} + \text{H}_2\text{O}$
- 61 (√) $\text{K}_4[\text{Fe}(\text{CN})_6]$ 溶液滴入 FeCl_3 溶液中: $\text{K}^+ + \text{Fe}^{3+} + [\text{Fe}(\text{CN})_6]^{4-} = \text{KFe}[\text{Fe}(\text{CN})_6] \downarrow$
- 62 (√) 将 $\text{Mg}(\text{HCO}_3)_2$ 溶液与过量的 NaOH 溶液混合:
 $2\text{HCO}_3^- + \text{Mg}^{2+} + 4\text{OH}^- = \text{Mg}(\text{OH})_2 \downarrow + 2\text{CO}_3^{2-} + 2\text{H}_2\text{O}$
- 63 (×) NaHCO_3 溶液与少量 $\text{Ba}(\text{OH})_2$ 溶液混合: $\text{HCO}_3^- + \text{Ba}^{2+} + \text{OH}^- = \text{BaCO}_3 \downarrow + \text{H}_2\text{O}$
- 64 (×) $\text{Na}_2\text{S}_2\text{O}_3$ 溶液与浓硝酸溶液混合: $\text{S}_2\text{O}_3^{2-} + 2\text{H}^+ = \text{S} \downarrow + \text{SO}_2 \uparrow + \text{H}_2\text{O}$
- 65 (√) NaAlO_2 溶液中加入 NaHCO_3 溶液: $\text{AlO}_2^- + \text{H}_2\text{O} + \text{HCO}_3^- = \text{CO}_3^{2-} + \text{Al}(\text{OH})_3 \downarrow$
- 66 (×) NaHSO_3 溶液中滴加足量的溴水: $4\text{HSO}_3^- + \text{Br}_2 = \text{SO}_4^{2-} + 2\text{Br}^- + 3\text{SO}_2 + 2\text{H}_2\text{O}$
- 67 (√) NH_4HCO_3 溶液和过量 $\text{Ca}(\text{OH})_2$ 溶液混合: $\text{Ca}^{2+} + \text{NH}_4^+ + \text{HCO}_3^- + 2\text{OH}^- = \text{CaCO}_3 \downarrow + \text{H}_2\text{O} + \text{NH}_3 \cdot \text{H}_2\text{O}$
- 68 (×) NaClO 溶液与 HI 溶液反应: $2\text{ClO}^- + 2\text{H}_2\text{O} + 2\text{I}^- = \text{I}_2 + \text{Cl}_2 \uparrow + 4\text{OH}^-$
- 69 (×) 磁性氧化铁溶于足量稀硝酸: $\text{Fe}_3\text{O}_4 + 8\text{H}^+ = \text{Fe}^{2+} + 2\text{Fe}^{3+} + 4\text{H}_2\text{O}$
- 70 (×) 明矾溶液中滴入 $\text{Ba}(\text{OH})_2$ 溶液使 SO_4^{2-} 恰好完全沉淀: $2\text{Ba}^{2+} + 3\text{OH}^- + \text{Al}^{3+} + 2\text{SO}_4^{2-} = 2\text{BaSO}_4 \downarrow + \text{Al}(\text{OH})_3 \downarrow$
- 71 (√) 检验溶液中的 Fe^{2+} : $\text{Fe}^{2+} + \text{K}^+ + [\text{Fe}(\text{CN})_6]^{3-} = \text{KFe}[\text{Fe}(\text{CN})_6] \downarrow$
- 72 (√) 向新制氯水中加入少量 CaCO_3 : $2\text{Cl}_2 + \text{H}_2\text{O} + \text{CaCO}_3 = \text{Ca}^{2+} + 2\text{Cl}^- + \text{CO}_2 \uparrow + 2\text{HClO}$
- 73 (×) 漂白粉失效的原理: $\text{ClO}^- + \text{CO}_2 + \text{H}_2\text{O} = \text{HClO} + \text{HCO}_3^-$
- 74 (√) 向苯酚浊液中加入少量 Na_2CO_3 溶液: $\text{C}_6\text{H}_5\text{OH} + \text{CO}_3^{2-} = \text{C}_6\text{H}_5\text{O}^- + \text{HCO}_3^-$
- 75 (×) 向酸性高锰酸钾溶液中加入过氧化氢, 紫色变浅: $2\text{MnO}_4^- + 7\text{H}_2\text{O}_2 + 6\text{H}^+ = 2\text{Mn}^{2+} + 6\text{O}_2 \uparrow + 10\text{H}_2\text{O}$
- 76 (×) 向 $\text{Na}_2\text{S}_2\text{O}_3$ 溶液中滴加稀硫酸, 溶液变浑浊: $3\text{S}_2\text{O}_3^{2-} + 2\text{H}^+ = 4\text{S} \downarrow + 2\text{SO}_4^{2-} + \text{H}_2\text{O}$
- 77 (√) 硫单质溶于强碱: $3\text{S} + 6\text{OH}^- = 2\text{S}^{2-} + \text{SO}_3^{2-} + 3\text{H}_2\text{O}$
- 78 (×) 向 NaAlO_2 溶液中加入足量 $\text{Ca}(\text{HCO}_3)_2$ 溶液: $\text{AlO}_2^- + \text{HCO}_3^- + \text{H}_2\text{O} = \text{Al}(\text{OH})_3 \downarrow + \text{CO}_3^{2-}$
- 79 (×) 用铁粉和过量的稀硝酸溶液反应: $3\text{Fe} + 8\text{H}^+ + 2\text{NO}_3^- = 3\text{Fe}^{2+} + 2\text{NO} \uparrow + 4\text{H}_2\text{O}$
- 80 (√) 可用 Na_2SO_3 溶液吸收少量 Cl_2 : $3\text{SO}_3^{2-} + \text{Cl}_2 + \text{H}_2\text{O} = 2\text{HSO}_3^- + 2\text{Cl}^- + \text{SO}_4^{2-}$
- 81 (√) NaHCO_3 溶液中滴加少量的 $\text{Ca}(\text{OH})_2$ 溶液: $2\text{HCO}_3^- + 2\text{OH}^- + \text{Ca}^{2+} = \text{CaCO}_3 \downarrow + \text{CO}_3^{2-} + 2\text{H}_2\text{O}$
- 82 (×) 向酸性高锰酸钾溶液加入草酸: $5\text{C}_2\text{O}_4^{2-} + 2\text{MnO}_4^- + 16\text{H}^+ = 10\text{CO}_2 \uparrow + 2\text{Mn}^{2+} + 8\text{H}_2\text{O}$
- 83 (×) $\text{CH}_2\text{BrCO}^{18}\text{OCH}_2\text{CH}_3$ 与足量 NaOH 溶液共热: $\text{CH}_2\text{BrCO}^{18}\text{OCH}_2\text{CH}_3 + \text{OH}^- \xrightarrow{\Delta} \text{CH}_2\text{BrCOO}^- + \text{CH}_3\text{CH}_2^{18}\text{OH}$
- 84 (×) $\text{Ba}(\text{NO}_3)_2$ 溶液中通入过 MgCl_2 量 SO_2 : $3\text{SO}_2 + 3\text{Ba}^{2+} + 2\text{NO}_3^- + 2\text{H}_2\text{O} = 3\text{BaSO}_4 \downarrow + 2\text{NO} \uparrow + 4\text{H}^+$
- 85 (√) 用惰性电极电解溶液, 阴极的电极反应式: $\text{Mg}^{2+} + 2\text{H}_2\text{O} + 2\text{e}^- = \text{Mg}(\text{OH})_2 \downarrow + \text{H}_2 \uparrow$
- 86 (×) 甘油与硝酸发生酯化反应:
$$\begin{array}{c} \text{CH}_2\text{-OH} \\ | \\ \text{CH-OH} \\ | \\ \text{CH}_2\text{-OH} \end{array} + 3\text{HNO}_3 \xrightarrow{\text{一定条件}} \begin{array}{c} \text{CH}_2\text{-NO}_2 \\ | \\ \text{CH-NO}_2 \\ | \\ \text{CH}_2\text{-NO}_2 \end{array} + 3\text{H}_2\text{O}$$
- 87 (√) 在酸催化下, 苯酚与甲醛反应生成羟甲基苯酚:

- 88 (√) 氧化铜与氨水: $\text{CuO} + 4\text{NH}_3 \cdot \text{H}_2\text{O} = \text{Cu}(\text{NH}_3)_4^{2+} + 2\text{OH}^- + 3\text{H}_2\text{O}$
- 89 (×) 向次氯酸钠溶液中通入少量二氧化硫: $\text{SO}_2 + \text{H}_2\text{O} + \text{ClO}^- = 2\text{H}^+ + \text{SO}_4^{2-} + \text{Cl}^-$

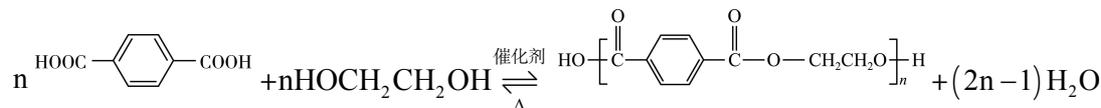
- 90 (×) 硝酸银溶液中滴加少量氨水: $\text{Ag}^+ + 2\text{NH}_3 = [\text{Ag}(\text{NH}_3)_2]^+$
- 91 (✓) 溴化亚铁溶液与等物质的量的氯气反应: $2\text{Fe}^{2+} + 2\text{Br}^- + 2\text{Cl}_2 = 2\text{Fe}^{3+} + \text{Br}_2 + 4\text{Cl}^-$
- 92 (×) 氯水中加入过量 Na_2CO_3 : $2\text{Cl}_2 + \text{CO}_3^{2-} + \text{H}_2\text{O} = 2\text{Cl}^- + 2\text{HClO} + \text{CO}_2 \uparrow$
- 93 (×) 漂白粉与浓盐酸混合使用: $\text{ClO}^- + \text{H}^+ = \text{HClO}$
- 94 (✓) 84 消毒液和白醋混合使用: $\text{CH}_3\text{COOH} + \text{ClO}^- = \text{HClO} + \text{CH}_3\text{COO}^-$
- 95 (×) 84 消毒液中滴入过量的 NaHSO_3 溶液: $\text{HSO}_3^- + \text{ClO}^- = \text{SO}_4^{2-} + \text{H}^+ + \text{Cl}^-$
- 96 (×) 向 FeI_2 溶液中滴加少量稀硝酸: $\text{NO}_3^- + 3\text{Fe}^{2+} + 4\text{H}^+ = 3\text{Fe}^{3+} + \text{NO} \uparrow + 2\text{H}_2\text{O}$
- 97 (×) AgCl 溶于过量氨水: $\text{Ag}^+ + 2\text{NH}_3 \cdot \text{H}_2\text{O} = [\text{Ag}(\text{NH}_3)_2]^+ + 2\text{H}_2\text{O}$
- 98 (✓) $\text{NH}_4\text{Fe}(\text{SO}_4)_2$ 溶液中滴加少量 $\text{Ba}(\text{OH})_2$ 溶液: $3\text{Ba}^{2+} + 6\text{OH}^- + 2\text{Fe}^{3+} + 3\text{SO}_4^{2-} = 3\text{BaSO}_4 \downarrow + 2\text{Fe}(\text{OH})_3 \downarrow$
- 99 (×) 硫酸铜溶液中滴加少量硫化钠溶液产生黑色沉淀: $\text{Cu}^{2+} + 2\text{HS}^- = \text{CuS} \downarrow + \text{H}_2\text{S} \uparrow$
- 100 (✓) 乙醛与氰化氢发生加成反应: $\text{CH}_3\text{CHO} + \text{HCN} \rightarrow \text{CH}_3\text{CH}(\text{OH})\text{CN}$
- 101 (×) 用铁做阳极电解饱和食盐水: $2\text{Cl}^- + 2\text{H}_2\text{O} \xrightarrow{\text{通电}} \text{Cl}_2 \uparrow + \text{H}_2 \uparrow + 2\text{OH}^-$
- 102 (✓) Al 溶于足量的氢氧化钠溶液: $2\text{Al} + 6\text{H}_2\text{O} + 2\text{OH}^- = 2[\text{Al}(\text{OH})_4]^- + 3\text{H}_2 \uparrow$
- 103 (✓) $\text{K}_3[\text{Fe}(\text{CN})_6]$ 溶液滴入 FeCl_2 溶液中: $\text{K}^+ + \text{Fe}^{2+} + [\text{Fe}(\text{CN})_6]^{3-} = \text{KFe}[\text{Fe}(\text{CN})_6] \downarrow$
- 104 (×) $[\text{Ag}(\text{NH}_3)_2]\text{OH}$ 溶液中加入过量盐酸: $\text{Ag}(\text{NH}_3)_2^+ + \text{OH}^- + 3\text{H}^+ = \text{Ag}^+ + 2\text{NH}_4^+ + \text{H}_2\text{O}$
- 105 (×) 向 $\text{K}_2\text{Cr}_2\text{O}_7$ 溶液中滴加少量浓 H_2SO_4 , 溶液橙色加深: $\text{Cr}_2\text{O}_7^{2-} + 2\text{OH}^- \rightleftharpoons 2\text{CrO}_4^{2-} + \text{H}_2\text{O}$
- 106 (✓) 向 KMnO_4 溶液中滴入 H_2O_2 溶液产生黑色沉淀和气泡:
 $2\text{MnO}_4^- + 3\text{H}_2\text{O}_2 = 2\text{MnO}_2 \downarrow + 3\text{O}_2 \uparrow + 2\text{OH}^- + 2\text{H}_2\text{O}$
- 107 (×) CuSO_4 溶液中滴加过量浓氨水: $\text{Cu}^{2+} + 2\text{NH}_3 \cdot \text{H}_2\text{O} = \text{Cu}(\text{OH})_2 \downarrow + 2\text{NH}_4^+$
- 108 (✓) 二氧化硫通入氯化铁溶液中: $\text{SO}_2 + 2\text{Fe}^{3+} + 2\text{H}_2\text{O} = 2\text{Fe}^{2+} + 4\text{H}^+ + \text{SO}_4^{2-}$
- 109 (×) NaHSO_4 溶液与 $\text{Ba}(\text{OH})_2$ 溶液反应恰好呈中性: $\text{H}^+ + \text{SO}_4^{2-} + \text{Ba}^{2+} + \text{OH}^- = \text{BaSO}_4 \downarrow + \text{H}_2\text{O}$
- 110 (×) 将少量氯气通入 NaHSO_3 溶液中: $\text{HSO}_3^- + \text{H}_2\text{O} + \text{Cl}_2 = 2\text{Cl}^- + 3\text{H}^+ + \text{SO}_4^{2-}$
- 111 (✓) 将 $\text{Ba}(\text{OH})_2$ 溶液滴入明矾 $[\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}]$ 溶液中至沉淀质量最大:
 $\text{Al}^{3+} + 2\text{SO}_4^{2-} + 2\text{Ba}^{2+} + 4\text{OH}^- = 2\text{BaSO}_4 \downarrow + \text{AlO}_2^- + 2\text{H}_2\text{O}$
- 112 (×) 同物质的量浓度同体积的 $\text{NH}_4\text{H}_2\text{PO}_4$ 溶液与 NaOH 溶液混合: $\text{NH}_4^+ + \text{OH}^- = \text{NH}_3 \cdot \text{H}_2\text{O}$
- 113 (✓) 氢氧化铁沉淀溶于氢碘酸: $2\text{Fe}(\text{OH})_3 + 6\text{H}^+ + 2\text{I}^- = 2\text{Fe}^{2+} + \text{I}_2 + 6\text{H}_2\text{O}$
- 114 (✓) 用硫化亚铁除去废水中的汞离子: $\text{FeS}(\text{s}) + \text{Hg}^{2+}(\text{aq}) = \text{Fe}^{2+}(\text{aq}) + \text{HgS}(\text{s})$
- 115 (✓) 向硫化钠溶液中滴加次氯酸钠溶液: $\text{S}^{2-} + \text{ClO}^- + \text{H}_2\text{O} = \text{S} \downarrow + \text{Cl}^- + 2\text{OH}^-$
- 116 (×) 向 FeBr_2 溶液中通入足量 Cl_2 : $2\text{Fe}^{2+} + 2\text{Br}^- + 2\text{Cl}_2 = 2\text{Fe}^{3+} + \text{Br}_2 + 4\text{Cl}^-$
- 117 (×) 向 CaCl_2 溶液中通入 CO_2 : $\text{Ca}^{2+} + \text{H}_2\text{O} + \text{CO}_2 = \text{CaCO}_3 \downarrow + 2\text{H}^+$
- 118 (✓) 向 $\text{NH}_4\text{Al}(\text{SO}_4)_2$ 溶液中滴入 $\text{Ba}(\text{OH})_2$ 溶液使 SO_4^{2-} 完全沉淀:
 $\text{NH}_4^+ + \text{Al}^{3+} + 2\text{SO}_4^{2-} + 2\text{Ba}^{2+} + 4\text{OH}^- = \text{Al}(\text{OH})_3 \downarrow + 2\text{BaSO}_4 \downarrow + \text{NH}_3 \cdot \text{H}_2\text{O}$
- 119 (×) 实验室用 FeS 制取少量 H_2S : $\text{S}^{2-} + 2\text{H}^+ = \text{H}_2\text{S} \uparrow$
- 120 (×) 食醋去除水垢中的 CaCO_3 : $\text{CaCO}_3 + 2\text{H}^+ = \text{Ca}^{2+} + \text{H}_2\text{O} + \text{CO}_2 \uparrow$
- 121 (×) 向浓硝酸中加入少量铜粉: $3\text{Cu} + 8\text{H}^+ + 2\text{NO}_3^- = 3\text{Cu}^{2+} + 2\text{NO} \uparrow + 4\text{H}_2\text{O}$

- 150 (×) 苯甲醛与新制的 $\text{Cu}(\text{OH})_2$ 共热: 
- 151 (×) 将少量 NaAlO_2 溶液滴入 $\text{Ca}(\text{HCO}_3)_2$ 溶液中: $\text{AlO}_2^- + \text{HCO}_3^- + \text{H}_2\text{O} = \text{Al}(\text{OH})_3 \downarrow + \text{CO}_3^{2-}$
- 152 (×) Fe_2O_3 溶于 HI 溶液中: $\text{Fe}_2\text{O}_3 + 6\text{H}^+ = 2\text{Fe}^{3+} + 3\text{H}_2\text{O}$
- 153 (×) 用 CH_3COOH 溶解 CaCO_3 : $\text{CaCO}_3 + 2\text{H}^+ = \text{Ca}^{2+} + \text{CO}_2 \uparrow + \text{H}_2\text{O}$
- 154 (×) 少量 CO_2 通入次氯酸钙溶液中: $\text{CO}_2 + \text{ClO}^- + \text{H}_2\text{O} = \text{HClO} + \text{HCO}_3^-$
- 155 (✓) 水中的溶解氧氧化氢氧化亚铁: $4\text{Fe}(\text{OH})_2 + \text{O}_2 + 2\text{H}_2\text{O} = 4\text{Fe}(\text{OH})_3$
- 156 (×) 乙烯加聚: $n\text{CH}_2=\text{CH}_2 \xrightarrow{\text{催化剂}} \text{[-CH}_2\text{]}_{2n}$
- 157 (✓) 酸化的碘化钾淀粉试纸检验食盐中的碘: $\text{IO}_3^- + 5\text{I}^- + 6\text{H}^+ = 3\text{I}_2 + 3\text{H}_2\text{O}$
- 158 (✓) 一元弱酸 H_3BO_3 电离: $\text{H}_3\text{BO}_3 + \text{H}_2\text{O} \rightleftharpoons \text{B}(\text{OH})_4^- + \text{H}^+$
- 159 (✓) 氯化氢将硅与杂质分离: $\text{Si} + 3\text{HCl} \xrightarrow{300^\circ\text{C}} \text{SiHCl}_3 + \text{H}_2$
- 160 (×) 将过量 SO_2 通入氨水中: $2\text{NH}_3 \cdot \text{H}_2\text{O} + \text{SO}_2 = 2\text{NH}_4^+ + \text{SO}_3^{2-} + \text{H}_2\text{O}$
- 161 (×) 向银氨溶液中加入足量稀盐酸: $[\text{Ag}(\text{NH}_3)_2]^+ + 2\text{H}^+ + \text{Cl}^- = \text{AgCl} \downarrow + 2\text{NH}_4^+$
- 162 (×) 向 Na_3AlF_6 溶液中滴加少量氨水: $\text{Al}^{3+} + 3\text{NH}_3 \cdot \text{H}_2\text{O} = \text{Al}(\text{OH})_3 \downarrow + 3\text{NH}_4^+$
- 163 (✓) 足量 SO_2 与次氯酸钙溶液混合: $2\text{SO}_2 + \text{Ca}^{2+} + 2\text{ClO}^- + 2\text{H}_2\text{O} = \text{CaSO}_4 \downarrow + 4\text{H}^+ + 2\text{Cl}^- + \text{SO}_4^{2-}$
- 164 (×) H_2SO_3 溶液中滴入氯化钡溶液: $\text{SO}_3^{2-} + \text{Ba}^{2+} = \text{BaSO}_3 \downarrow$
- 165 (×) 铅酸蓄电池充电时的阳极反应: $\text{Pb}^{2+} + 2\text{H}_2\text{O} - 2\text{e}^- = \text{PbO}_2 + 4\text{H}^+$
- 166 (×) 水杨酸溶液中加入少量碳酸钠: 
- 167 (✓) 向含溶质 $a \text{ mol}$ 的 FeBr_2 溶液中通入 $b \text{ mol}$ Cl_2 , 充分反应, 当 $3a \leq 2b$ 时, 反应的离子方程式为:
 $2\text{Fe}^{2+} + 4\text{Br}^- + 3\text{Cl}_2 = 2\text{Fe}^{3+} + 2\text{Br}_2 + 6\text{Cl}^-$
- 168 (×) 向 NaHSO_3 溶液中滴入酸化的 $\text{Ba}(\text{NO}_3)_2$ 溶液产生白色沉淀: $3\text{HSO}_3^- + \text{Ba}^{2+} = \text{H}_2\text{O} + \text{SO}_2 \uparrow + \text{BaSO}_3 \downarrow$
- 169 (✓) 将 CuCl 溶于 $\text{NH}_4\text{Cl}-\text{NH}_3 \cdot \text{H}_2\text{O}$ 的混合液中, 久置后得到深蓝色溶液:
 $4\text{CuCl} + 4\text{NH}_4^+ + \text{O}_2 + 12\text{NH}_3 = 4[\text{Cu}(\text{NH}_3)_4]^{2+} + 2\text{H}_2\text{O} + 4\text{Cl}^-$
- 170 (×) 酰胺在酸性条件下的水解: $\text{RCONH}_2 + \text{H}_2\text{O} \xrightarrow{\Delta} \text{RCOOH} + \text{NH}_3$
- 171 (×) Cl_2 与过量 Na_2CO_3 溶液反应生成 Cl_2O : $\text{Na}_2\text{CO}_3 + 2\text{Cl}_2 = \text{Cl}_2\text{O} + \text{CO}_2 + 2\text{NaCl}$
- 172 (✓) 铝粉氢氧化钠固体管道疏通剂与水反应: $2\text{Al} + 2\text{OH}^- + 6\text{H}_2\text{O} = 2[\text{Al}(\text{OH})_4]^- + 3\text{H}_2 \uparrow$
- 173 (×) 硫化亚铁除去废水中的 Hg^{2+} : $\text{Hg}^{2+} + \text{S}^{2-} = \text{HgS} \downarrow$
- 174 (✓) $\text{Al}_2(\text{SO}_4)_3$ 溶液与 $\text{Na}[\text{Al}(\text{OH})_4]$ 溶液反应: $\text{Al}_2(\text{SO}_4)_3 + 6\text{Na}[\text{Al}(\text{OH})_4] = 3\text{Na}_2\text{SO}_4 + 8\text{Al}(\text{OH})_3 \downarrow$
- 175 (×) 少量甲醛与新制 $\text{Cu}(\text{OH})_2$ 反应: $\text{HCHO} + 2\text{Cu}(\text{OH})_2 + \text{NaOH} \xrightarrow{\Delta} \text{HCOONa} + \text{Cu}_2\text{O} \downarrow + 3\text{H}_2\text{O}$
- 176 (✓) 含等物质的量的 NH_4HSO_4 和 $\text{Ba}(\text{OH})_2$ 的溶液混合的离子方程式:
 $\text{NH}_4^+ + \text{H}^+ + \text{SO}_4^{2-} + \text{Ba}^{2+} + 2\text{OH}^- = \text{NH}_3 \cdot \text{H}_2\text{O} + \text{H}_2\text{O} + \text{BaSO}_4 \downarrow$
- 177 (×) 铅酸蓄电池充电时的阳极反应: $\text{Pb}^{2+} + 2\text{H}_2\text{O} - 2\text{e}^- = \text{PbO}_2 + 4\text{H}^+$

178 (✓)表示CH₃NH₂气体燃烧热的热化学方程式:



179 (✓)对苯二甲酸与乙二醇合成涤纶:



180 (✓)用饱和碳酸钠溶液浸泡BaSO₄沉淀: $\text{BaSO}_4 + \text{CO}_3^{2-} \rightleftharpoons \text{BaCO}_3 + \text{SO}_4^{2-}$

181 (✗)Al与NaOH溶液反应: $2\text{Al} + 2\text{OH}^- + 6\text{H}_2\text{O} = 2\text{Al}(\text{OH})_3 \downarrow + 3\text{H}_2 \uparrow$

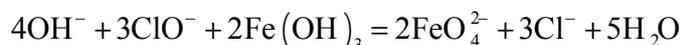
182 (✗)向FeCl₃溶液中加入过量Na₂S溶液: $2\text{Fe}^{3+} + \text{S}^{2-} = 2\text{Fe}^{2+} + \text{S} \downarrow$

183 (✓)铜片与某硝酸恰好生成相同量NO、NO₂的反应: $2\text{Cu} + 6\text{H}^+ + 2\text{NO}_3^- = 2\text{Cu}^{2+} + \text{NO} \uparrow + \text{NO}_2 \uparrow + 3\text{H}_2\text{O}$

184 (✗)碳酸氢钙溶液滴加少量的澄清石灰水: $\text{Ca}^{2+} + 2\text{OH}^- + 2\text{HCO}_3^- = \text{CaCO}_3 \downarrow + \text{CO}_3^{2-} + 2\text{H}_2\text{O}$

185 (✓)向氢氧化镁悬浊液中滴加氯化铵溶液, 沉淀溶解: $\text{Mg}(\text{OH})_2 + 2\text{NH}_4^+ = \text{Mg}^{2+} + 2\text{NH}_3 \cdot \text{H}_2\text{O}$

186 (✓)在强碱溶液中次氯酸钠与Fe(OH)₃反应生成Na₂FeO₄的离子反应为:



187 (✗)水煤气法制氢: $\text{C}(\text{s}) + \text{H}_2\text{O}(\text{g}) = \text{H}_2(\text{g}) + \text{CO}(\text{g}) \Delta H = -131.3\text{kJ/mol}$

188 (✓)HCO₃⁻催化加氢生成HCOO⁻的反应: $\text{HCO}_3^- + \text{H}_2 \xrightleftharpoons{\text{催化剂}} \text{HCOO}^- + \text{H}_2\text{O}$

189 (✗)电解水制氢的阳极反应: $2\text{H}_2\text{O} - 2\text{e}^- = \text{H}_2 \uparrow + 2\text{OH}^-$

190 (✗)CaH₂与水反应: $\text{CaH}_2 + 2\text{H}_2\text{O} = \text{Ca}(\text{OH})_2 + \text{H}_2 \uparrow$

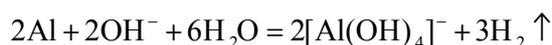
191 (✗)工业制粗硅: $\text{SiO}_2 + \text{C} \xrightarrow{\text{高温}} \text{Si} + \text{CO}_2$

192 (✗)铅蓄电池充电时阳极反应: $\text{PbSO}_4 - 2\text{e}^- = \text{Pb} + \text{SO}_4^{2-}$

193 (✓)氯水中加入小苏打提高漂白性: $\text{Cl}_2 + \text{HCO}_3^- = \text{Cl}^- + \text{HClO} + \text{CO}_2 \uparrow$

194 (✗)用盐酸处理铜器表面的铜锈: $\text{CuO} + 2\text{HCl} = \text{CuCl}_2 + \text{H}_2\text{O}$

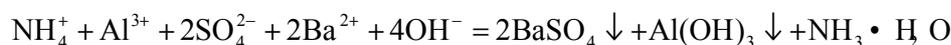
195 (✓)铝制餐具不宜用来长时间存放碱性食物: $\text{Al}_2\text{O}_3 + 2\text{OH}^- + 3\text{H}_2\text{O} = 2[\text{Al}(\text{OH})_4]^-$ 和



196 (✗)用NaOH溶液除去油脂: $\text{CH}_3\text{COOCH}_2\text{CH}_3 + \text{OH}^- \rightarrow \text{CH}_3\text{COO}^- + \text{CH}_3\text{CH}_2\text{OH}$

197 (✓)使用含氟牙膏预防龋齿: $\text{Ca}_5(\text{PO}_4)_3\text{OH} + \text{F}^- \rightleftharpoons \text{Ca}_5(\text{PO}_4)_3\text{F} + \text{OH}^-$

198 (✓)0.01mol/LNH₄Al(SO₄)₂溶液与0.02mol/LBa(OH)₂溶液等体积混合:



199 (✗)向Ca(ClO)₂溶液中通入过量的SO₂: $\text{ClO}^- + \text{SO}_2 + \text{H}_2\text{O} = \text{HClO} + \text{HSO}_3^-$

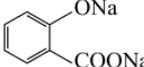
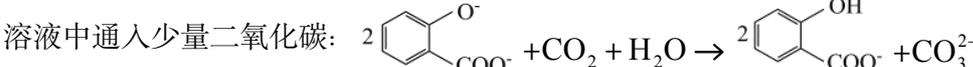
200 (✗)向氢氧化铁中滴加氢碘酸溶液: $3\text{H}^+ + \text{Fe}(\text{OH})_3 = 2\text{Fe}^{3+} + 3\text{H}_2\text{O}$

201 (✗)向Na₂S₂O₃溶液中通入少量氯气: $\text{S}_2\text{O}_3^{2-} + 4\text{Cl}_2 + 5\text{H}_2\text{O} = 2\text{SO}_4^{2-} + 8\text{Cl}^- + 10\text{H}^+$

202 (✗)向稀硝酸中加入少量磁性氧化铁粉末: $\text{Fe}_3\text{O}_4 + 8\text{H}^+ = 2\text{Fe}^{3+} + \text{Fe}^{2+} + 4\text{H}_2\text{O}$

203 (✓)已知H₂SO₄的K_{a2} = 1.0 × 10⁻², 将硫酸铜溶解于足量浓盐酸中:

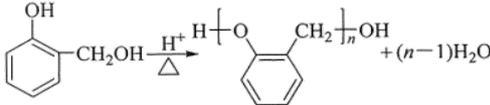


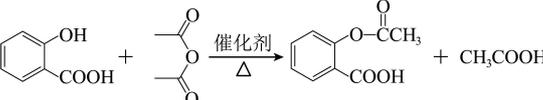
204 (✗)向溶液中通入少量二氧化碳: 

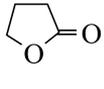
205 (✓)Na₂S溶液在空气中氧化变质: $2\text{S}^{2-} + \text{O}_2 + 2\text{H}_2\text{O} = 2\text{S} \downarrow + 4\text{OH}^-$

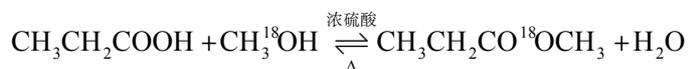
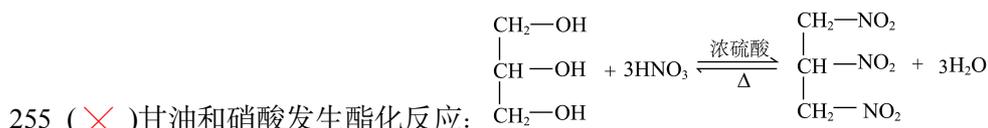
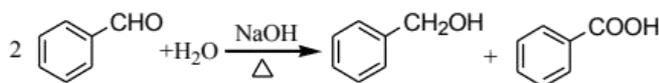
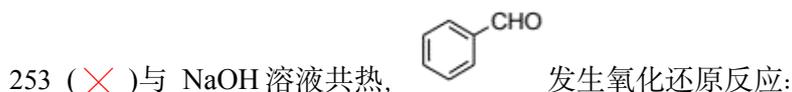
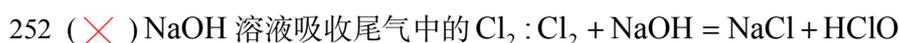
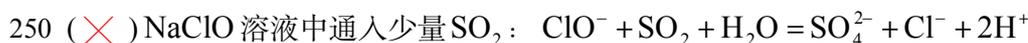
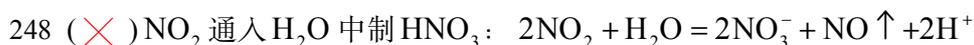
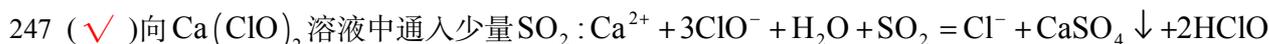
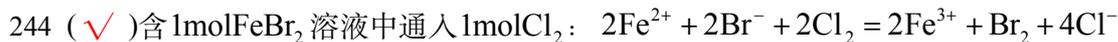
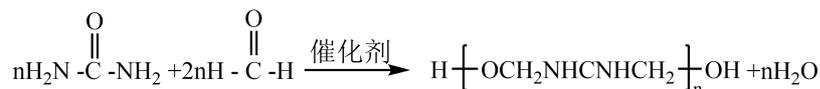
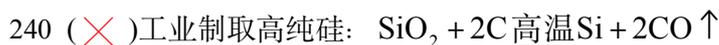
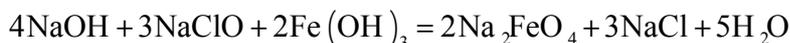
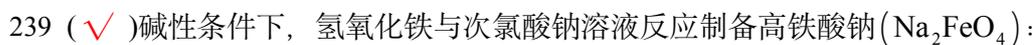
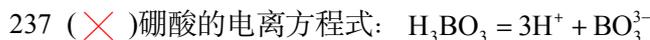
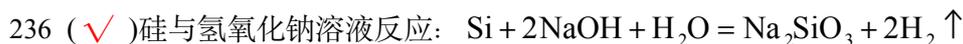
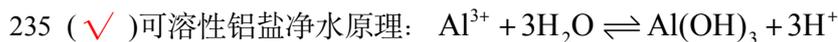
- 206 (✓) 尿素溶于热水: $\text{CO}(\text{NH}_2)_2 + 2\text{H}_2\text{O} = (\text{NH}_4)_2\text{CO}_3$
- 207 (✗) CaCO_3 的电离平衡: $\text{CaCO}_3(\text{s}) \rightleftharpoons \text{Ca}^{2+}(\text{aq}) + \text{CO}_3^{2-}(\text{aq})$
- 208 (✓) $\text{NH}_4\text{Al}(\text{SO}_4)_2$ 与一定量的 $\text{Ba}(\text{OH})_2$ 可能存在反应:

$$2\text{Al}^{3+} + 6\text{OH}^- + 3\text{Ba}^{2+} + 3\text{SO}_4^{2-} = 2\text{Al}(\text{OH})_3 \downarrow + 3\text{BaSO}_4 \downarrow$$
- 209 (✓) 黄铁矿的燃烧: $4\text{FeS}_2 + 11\text{O}_2 \xrightarrow{\text{高温}} 2\text{Fe}_2\text{O}_3 + 8\text{SO}_2$
- 210 (✓) 十水碳酸钠与硝酸铵反应:

$$\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O} + 2\text{NH}_4\text{NO}_3 = 2\text{NaNO}_3 + \text{CO}_2 \uparrow + 2\text{NH}_3 \uparrow + 11\text{H}_2\text{O}$$
- 211 (✗) 邻羟甲基苯酚脱水缩合: 
- 212 (✓) NO 气体检验: $2\text{NO} + \text{O}_2 = 2\text{NO}_2$
- 213 (✓) 煤的气化: $\text{C} + \text{H}_2\text{O} \xrightarrow{\text{高温}} \text{CO} + \text{H}_2$
- 214 (✓) 氧炔焰切割金属: $2\text{C}_2\text{H}_2 + 5\text{O}_2 \xrightarrow{\text{点燃}} 4\text{CO}_2 + 2\text{H}_2\text{O}$
- 215 (✗) 铜在空气中生成碱式碳酸铜: $2\text{Cu} + \text{CO}_2 + \text{H}_2\text{O} = \text{Cu}_2(\text{OH})_2\text{CO}_3$
- 216 (✗) 铅酸蓄电池放电时的负极反应: $\text{Pb} - 2\text{e}^- = \text{Pb}^{2+}$
- 217 (✗) Cu_2O 溶于稀硝酸得蓝色溶液, $3\text{Cu}^+ + \text{NO}_3^- + 4\text{H}^+ = 3\text{Cu}^{2+} + \text{NO} \uparrow + 2\text{H}_2\text{O}$
- 218 (✓) 丙烯与足量酸性高锰酸钾溶液反应: $\text{CH}_2 = \text{CH} - \text{CH}_3 + 2\text{MnO}_4^- + 6\text{H}^+ \rightarrow \text{CH}_3\text{COOH} + \text{CO}_2 + 2\text{Mn}^{2+} + 4\text{H}_2\text{O}$
- 219 (✗) 将浓度均为 0.1mol/L 的 $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2$ 和 $\text{Ba}(\text{OH})_2$ 溶液按体积比 $1:1$ 混合:

$$2\text{NH}_4^+ + \text{SO}_4^{2-} + \text{Ba}^{2+} + 2\text{OH}^- = \text{BaSO}_4 \downarrow + 2\text{NH}_3 \cdot \text{H}_2\text{O}$$
- 220 (✓) FeSO_4 溶液中加入 H_2O_2 产生沉淀: $2\text{Fe}^{2+} + \text{H}_2\text{O}_2 + 4\text{H}_2\text{O} = \text{Fe}(\text{OH})_3 \downarrow + 4\text{H}^+$
- 221 (✓) 将二氧化硫通入氢硫酸中产生黄色沉淀: $\text{SO}_2 + 2\text{H}_2\text{S} = 3\text{S} \downarrow + 2\text{H}_2\text{O}$
- 222 (✓) 甲烷的燃烧热为 $-890.3\text{kJ}\cdot\text{mol}^{-1}$: $\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) = \text{CO}_2(\text{g}) + 2\text{H}_2\text{O}(\text{l}) \quad \Delta H = -890.3\text{kJ}\cdot\text{mol}^{-1}$
- 223 (✗) 向血红色 $\text{Fe}(\text{SCN})_3$ 溶液中加入过量铁粉至溶液浅绿色: $2\text{Fe}^{3+} + \text{Fe} = 3\text{Fe}^{2+}$
- 224 (✓) 碱性锌锰电池的正极反应: $\text{MnO}_2 + \text{H}_2\text{O} + \text{e}^- = \text{MnO}(\text{OH}) + \text{OH}^-$
- 225 (✓) 阿司匹林的制备: 
- 226 (✗) 氢氧化镁能溶于氯化铵溶液: $\text{Mg}(\text{OH})_2 + 2\text{H}^+ = \text{Mg}^{2+} + 2\text{H}_2\text{O}$
- 227 (✗) 25°C 和 101kPa , 表示甲烷的燃烧热的热化学方程式:

$$\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) = \text{CO}_2(\text{g}) + 2\text{H}_2\text{O}(\text{g}) \quad \Delta H = -890.3\text{kJ/mol}$$
- 228 (✗) γ -羟基丁酸($\text{HOCH}_2\text{CH}_2\text{CH}_2\text{COOH}$)生成 γ -丁内酯(): $\text{HOCH}_2\text{CH}_2\text{CH}_2\text{COOH} \xrightleftharpoons[\Delta]{\text{H}^+}$ 
- 229 (✓) 氨的催化氧化反应: $4\text{NH}_3 + 5\text{O}_2 \xrightarrow[\Delta]{\text{催化剂}} 4\text{NO} + 6\text{H}_2\text{O}$
- 230 (✗) Na_2SO_3 溶液中滴入少量氯水: $\text{SO}_3^{2-} + \text{Cl}_2 + \text{H}_2\text{O} = \text{SO}_4^{2-} + 2\text{H}^+ + 2\text{Cl}^-$
- 231 (✓) $\text{Al}(\text{OH})_3$ 溶于 NaOH 溶液: $\text{Al}(\text{OH})_3 + \text{OH}^- = [\text{Al}(\text{OH})_4]^-$
- 232 (✓) 氢氧化铍溶于强碱: $\text{Be}(\text{OH})_2 + 2\text{OH}^- = [\text{Be}(\text{OH})_4]^{2-}$
- 233 (✗) 向 AlCl_3 溶液中滴加过量氨水: $\text{Al}^{3+} + 4\text{NH}_3 \cdot \text{H}_2\text{O} = \text{AlO}_2^- + 4\text{NH}_4^+ + 2\text{H}_2\text{O}$



- 259 (✓)澄清石灰水与少量小苏打溶液混合: $\text{Ca}^{2+} + \text{OH}^- + \text{HCO}_3^- = \text{CaCO}_3 \downarrow + \text{H}_2\text{O}$
- 260 (✗) H_2 的燃烧热为 285.8kJ/mol , 则 H_2 燃烧热的热化学方程式为:

$$2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) = 2\text{H}_2\text{O}(\text{l}) \quad \Delta H = -571.6\text{kJ} \cdot \text{mol}^{-1}$$
- 261 (✗)加热条件下在空气中用镁与 TiCl_4 反应制钛: $2\text{Mg} + \text{TiCl}_4 \triangleq \text{Ti} + 2\text{MgCl}_2$
- 262 (✓)饱和 Na_2CO_3 溶液处理水垢: $\text{CaSO}_4(\text{s}) + \text{CO}_3^{2-}(\text{aq}) \rightleftharpoons \text{CaCO}_3(\text{s}) + \text{SO}_4^{2-}(\text{aq})$
- 263 (✓)用浓硝酸清洗试管内壁附着的银: $\text{Ag} + 2\text{H}^+ + \text{NO}_3^- = \text{Ag}^+ + \text{NO}_2 \uparrow + \text{H}_2\text{O}$
- 264 (✓) Na_2CO_3 溶液中通入过量 SO_2 : $\text{CO}_3^{2-} + 2\text{SO}_2 + \text{H}_2\text{O} = 2\text{HSO}_3^- + \text{CO}_2$
- 265 (✗)向 H_2^{18}O 中投入 Na_2O_2 固体: $2\text{H}_2^{18}\text{O} + 2\text{Na}_2\text{O}_2 = 4\text{Na}^+ + 4\text{OH}^- + {}^{18}\text{O}_2 \uparrow$
- 266 (✗)浓硝酸见光分解: $4\text{HNO}_3 \xrightarrow{\text{光照}} 4\text{NO} \uparrow + 3\text{O}_2 \uparrow + 2\text{H}_2\text{O}$
- 267 (✗) H_2 的燃烧热为 $241.8\text{kJ} \cdot \text{mol}^{-1}$, 则 $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) = 2\text{H}_2\text{O}(\text{g}) \quad \Delta H = -483.6\text{kJ} \cdot \text{mol}^{-1}$
- 268 (✓)亚硫酸钠溶液中通入二氧化硫气体: $\text{SO}_3^{2-} + \text{SO}_2 + \text{H}_2\text{O} = 2\text{HSO}_3^-$
- 269 (✗)铜片和足量浓硝酸反应: $4\text{HNO}_3(\text{浓}) + \text{Cu} = \text{Cu}^{2+} + 2\text{H}_2\text{O} + 2\text{NO}_2 \uparrow$
- 270 (✓)硫酸铜溶液中滴入氨水至产生沉淀恰好溶解时总的离子方程式为:

$$\text{Cu}^{2+} + 4\text{NH}_3 \cdot \text{H}_2\text{O} = \text{Cu}(\text{NH}_3)_4^{2+} + 4\text{H}_2\text{O}$$
- 271 (✓)常温下, 内壁沾有硫的试管中加入 $5\text{mL} 0.6\text{mol/L} \text{Na}_2\text{S}$ 溶液, 振荡后得到略显黄色的澄清溶液:

$$\text{S}^{2-} + (x-1)\text{S} = \text{S}_x^{2-}$$
- 272 (✓)将 SnCl_4 放入水中: $\text{SnCl}_4 + (x+2)\text{H}_2\text{O} = \text{SnO}_2 \cdot x\text{H}_2\text{O} \downarrow + 4\text{HCl}$
- 273 (✗)将过量 SO_2 通入次氯酸钙溶液: $\text{Ca}^{2+} + \text{SO}_2 + 3\text{ClO}^- + \text{H}_2\text{O} = \text{CaSO}_4 \downarrow + 2\text{HClO} + \text{Cl}^-$
- 274 (✗)乙醚的制备: $2\text{C}_2\text{H}_5\text{OH} \xrightarrow{140^\circ\text{C}} (\text{C}_2\text{H}_5)_2\text{O} + \text{H}_2\text{O}$
- 275 (✗)制备 84 消毒液: $\text{Cl}_2 + 2\text{NaOH} \triangleq \text{NaCl} + \text{NaClO} + \text{H}_2\text{O}$
- 276 (✗)用 FeS 除去工业废水中的 Hg^{2+} : $\text{Hg}^{2+} + \text{S}^{2-} = \text{HgS} \downarrow$
- 277 (✗)硫代硫酸钠溶液中加入浓硝酸: $\text{S}_2\text{O}_3^{2-} + 2\text{H}^+ = \text{S} \uparrow + \text{SO}_2 \uparrow + \text{H}_2\text{O}$
- 278 (✗)漂白粉溶液中通入过量 CO_2 : $\text{Ca}^{2+} + 2\text{ClO}^- + \text{CO}_2 + \text{H}_2\text{O} = 2\text{HClO} + \text{CaCO}_3 \downarrow$
- 279 (✗) NaClO 溶液与浓盐酸等浓度等体积混合: $\text{ClO}^- + \text{H}^+ = \text{HClO}$
- 280 (✓)将足量 $\text{Fe}_2(\text{SO}_4)_3$ 溶液滴入 $\text{Mg}(\text{OH})_2$ 浊液中:

$$2\text{Fe}^{3+}(\text{aq}) + 3\text{Mg}(\text{OH})_2(\text{s}) = 2\text{Fe}(\text{OH})_3(\text{s}) + 3\text{Mg}^{2+}(\text{aq})$$
- 281 (✗)将 $1\text{mol} \text{Cl}_2$ 通入含 $1\text{mol} \text{FeI}_2$ 的溶液中: $2\text{Fe}^{2+} + \text{Cl}_2 = 2\text{Fe}^{3+} + 2\text{Cl}^-$
- 282 (✗)铁粉与氯化铁溶液混合: $\text{Fe} + \text{Fe}^{3+} = 2\text{Fe}^{2+}$
- 283 (✗)向氢氧化钡溶液中加入稀硫酸: $\text{Ba}^{2+} + \text{OH}^- + \text{H}^+ + \text{SO}_4^{2-} = \text{BaSO}_4 \downarrow + \text{H}_2\text{O}$
- 284 (✓)醋酸与氢氧化钠溶液反应: $\text{CH}_3\text{COOH} + \text{OH}^- = \text{CH}_3\text{COO}^- + \text{H}_2\text{O}$
- 285 (✗) Na_2O_2 固体投入水中: $2\text{O}_2^{2-} + 2\text{H}_2\text{O} = 4\text{OH}^- + \text{O}_2 \uparrow$
- 286 (✗) NaCl 溶液滴入 KMnO_4 酸性溶液: $10\text{Cl}^- + 2\text{MnO}_4^- + 8\text{H}_2\text{O} = 5\text{Cl}_2 \uparrow + 2\text{Mn}^{2+} + 16\text{OH}^-$
- 287 (✓)利用稀硫酸、 KNO_3 、铜片制硝酸铜: $3\text{Cu} + 8\text{H}^+ + 2\text{NO}_3^- = 3\text{Cu}^{2+} + 2\text{NO} \uparrow + 4\text{H}_2\text{O}$
- 288 (✓)用浓氨水吸收少量 SO_2 尾气: $2\text{NH}_3 \cdot \text{H}_2\text{O} + \text{SO}_2 = (\text{NH}_4)_2\text{SO}_3 + \text{H}_2\text{O}$

- 289 (✗) 向红色 $\text{Fe}(\text{SCN})_3$ 溶液中加入过量铁粉至溶液显浅绿色: $2\text{Fe}^{3+} + \text{Fe} = 3\text{Fe}^{2+}$
- 290 (✗) 将足量 SO_2 通入 Na_2S 溶液: $2\text{SO}_2 + 2\text{H}_2\text{O} + \text{S}^{2-} = 2\text{HSO}_3^- + \text{H}_2\text{S}$
- 291 (✓) Al 溶于 NaOH 溶液: $2\text{Al} + 2\text{OH}^- + 6\text{H}_2\text{O} = 2[\text{Al}(\text{OH})_4]^- + 3\text{H}_2 \uparrow$
- 292 (✗) Na_2O_2 与水反应: $\text{O}_2^{2-} + 2\text{H}_2\text{O} = 4\text{OH}^- + \text{O}_2 \uparrow$
- 293 (✓) 乙醛银镜反应: $\text{CH}_3\text{CHO} + 2\text{Ag}(\text{NH}_3)_2^+ + 2\text{OH}^- = \text{CH}_3\text{COO}^- + 2\text{Ag} \downarrow + 3\text{NH}_3 + \text{H}_2\text{O} + \text{NH}_4^+$
- 294 (✗) 能使酚酞变红的溶液中可大量存在 Mg^{2+} 、 Al^{3+} 、 HSO_3^- 、 SO_4^{2-}
- 295 (✗) 由水电离的 $c(\text{H}^+) = 1.0 \times 10^{-12} \text{mol} \cdot \text{L}^{-1}$ 的溶液中能大量存在 $[\text{Ag}(\text{NH}_3)_2]^+$ 、 Ca^{2+} 、 Br^- 、 NO_3^-
- 296 (✓) $0.1 \text{mol} \cdot \text{L}^{-1} \text{KMnO}_4$ 溶液中不能大量共存 H^+ 、 NH_4^+ 、 Na^+ 、 I^-
- 297 (✗) 向含有 1mol 明矾的溶液中滴加 $\text{Ba}(\text{OH})_2$ 溶液至沉淀的质量最大:

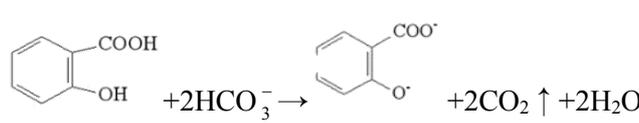
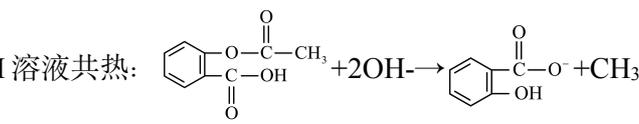
$$2\text{Al}^{3+} + 3\text{SO}_4^{2-} + 3\text{Ba}^{2+} + 6\text{OH}^- = 2\text{Al}(\text{OH})_3 \downarrow + 3\text{BaSO}_4 \downarrow$$
- 298 (✓) 乙炔制丙烯腈: $\text{CH} \equiv \text{CH} + \text{HCN} \xrightarrow{\text{催化剂}} \text{CH}_2 = \text{CHCN}$
- 299 (✗) 向 $\text{Fe}_2(\text{SO}_4)_3$ 溶液中通入足量 H_2S : $2\text{Fe}^{3+} + \text{S}^{2-} = 2\text{Fe}^{2+} + \text{S} \downarrow$
- 300 (✗) 向 $\text{Ca}(\text{ClO})_2$ 溶液中通入少量 SO_2 : $\text{Ca}^{2+} + \text{ClO}^- + \text{SO}_2 + \text{H}_2\text{O} = \text{Cl}^- + \text{CaSO}_4 \downarrow + 2\text{H}^+$
- 301 (✓) 向丙烯醛中加入足量溴的四氯化碳溶液: $\text{CH}_2 = \text{CHCHO} + \text{Br}_2 \rightarrow \text{CH}_2\text{BrCHBrCHO}$
- 302 (✗) 向 K_2CrO_4 溶液中加入少量 $\text{H}_2\text{C}_2\text{O}_4$: $2\text{CrO}_4^{2-} + \text{H}_2\text{C}_2\text{O}_4 = \text{Cr}_2\text{O}_7^{2-} + \text{H}_2\text{O} + \text{C}_2\text{O}_4^{2-}$
- 303 (✗) 工业上用足量次氯酸钠溶液氧化尿素制脲: $\text{NaClO} + \text{CO}(\text{NH}_2)_2 = \text{NaCl} + \text{N}_2\text{H}_4 + \text{CO}_2$
- 304 (✓) CuSO_4 溶液与闪锌矿 (ZnS) 反应生成铜蓝 (CuS): $\text{Cu}^{2+}(\text{aq}) + \text{ZnS}(\text{s}) \rightleftharpoons \text{Zn}^{2+}(\text{aq}) + \text{CuS}(\text{s})$
- 305 (✗) 过量的碳酸钠溶液吸收氯气: $\text{CO}_3^{2-} + \text{Cl}_2 = \text{CO}_2 + \text{ClO}^- + \text{Cl}^-$
- 306 (✗) 向 $\text{NH}_4\text{Al}(\text{SO}_4)_2$ 溶液中滴入 $\text{Ba}(\text{OH})_2$ 使 SO_4^{2-} 反应完全:

$$2\text{Ba}^{2+} + 4\text{OH}^- + \text{Al}^{3+} + 2\text{SO}_4^{2-} = 2\text{BaSO}_4 \downarrow + [\text{Al}(\text{OH})_4]^-$$
- 307 (✓) 黑火药爆炸: $\text{S} + 2\text{KNO}_3 + 3\text{C} \xrightarrow{\text{点燃}} \text{K}_2\text{S} + \text{N}_2 \uparrow + 3\text{CO}_2 \uparrow$
- 308 (✓) 加热氯化铜溶液: $[\text{Cu}(\text{H}_2\text{O})_4]^{2+} + 4\text{Cl}^- = [\text{CuCl}_4]^{2-} + 4\text{H}_2\text{O}$
- 309 (✗) 向 1mol FeBr_2 溶液中通入一定量氯气发生反应, 当转移电子数 1N_A 为时:

$$2\text{Fe}^{2+} + 2\text{Br}^- + 2\text{Cl}_2 = 2\text{Fe}^{3+} + \text{Br}_2 + 4\text{Cl}^-$$
- 310 (✓) 以水杨酸为原料生产阿司匹林(乙酰水杨酸):

- 311 (✓) 乙酰胺在盐酸溶液中加热: $\text{CH}_3\text{CONH}_2 + \text{H}_2\text{O} + \text{H}^+ \xrightarrow{\Delta} \text{CH}_3\text{COOH} + \text{NH}_4^+$
- 312 (✗) 苯酚钠溶液中通入少量 CO_2 气体: $2\text{C}_6\text{H}_5\text{O}^- + \text{CO}_2 + \text{H}_2\text{O} = 2\text{C}_6\text{H}_5\text{OH} + \text{CO}_3^{2-}$
- 313 (✓) 用稀硫酸除去硫酸钠溶液中少量的硫代硫酸钠: $\text{S}_2\text{O}_3^{2-} + 2\text{H}^+ = \text{SO}_2 \uparrow + \text{S} \downarrow + \text{H}_2\text{O}$
- 314 (✓) 向含氯化铁的氯化镁溶液中加入氧化镁: $2\text{Fe}^{3+} + 3\text{MgO} + 3\text{H}_2\text{O} = 2\text{Fe}(\text{OH})_3 \downarrow + 3\text{Mg}^{2+}$
- 315 (✓) 向 $\text{Cu}(\text{OH})_2$ 溶液中滴加过量氨水和乙醇: $\text{Cu}(\text{OH})_2 + 4\text{NH}_3 = [\text{Cu}(\text{NH}_3)_4](\text{OH})_2$
- 316 (✗) 溴乙烷为原料制备乙烯: $\text{CH}_3\text{CH}_2\text{Br} + \text{NaOH} \xrightarrow[\Delta]{\text{浓硫酸}} \text{CH}_2 = \text{CH}_2 \uparrow + \text{NaBr} + \text{H}_2\text{O}$
- 317 (✓) 向 Na_2CO_3 溶液中滴加少量新制氯水: $2\text{CO}_3^{2-} + \text{Cl}_2 + \text{H}_2\text{O} = 2\text{HCO}_3^- + \text{Cl}^- + \text{ClO}^-$

- 318 (✓) 电解饱和食盐水时阴极处产生可燃性气体: $2\text{H}_2\text{O} + 2\text{e}^- = \text{H}_2 \uparrow + 2\text{OH}^-$
- 319 (✗) 用硫代硫酸钠溶液脱氯: $\text{S}_2\text{O}_3^{2-} + 2\text{Cl}_2 + 3\text{H}_2\text{O} = 2\text{SO}_3^{2-} + 4\text{Cl}^- + 6\text{H}^+$
- 320 (✓) 呼吸面罩中过氧化钠吸收二氧化碳: $2\text{Na}_2\text{O}_2 + 2\text{CO}_2 = 2\text{Na}_2\text{CO}_3 + \text{O}_2$
- 321 (✗) 二氧化硫通入硝酸钡溶液中, 产生白色沉淀: $\text{SO}_2 + \text{Ba}^{2+} + \text{H}_2\text{O} = \text{BaSO}_3 \downarrow + 2\text{H}^+$
- 322 (✓) 硫酸铜除去电石与水反应产物中的杂质之一, 生成黑色沉淀: $\text{Cu}^{2+} + \text{H}_2\text{S} = \text{CuS} \downarrow + 2\text{H}^+$
- 323 (✓) 钢铁在中性条件下发生吸氧腐蚀的电化学方程: $2\text{Fe} + \text{O}_2 + 2\text{H}_2\text{O} = 2\text{Fe}(\text{OH})_2$
- 324 (✓) 用银作阳极电极电解稀盐酸, 阳极生成氯化银, 阳极电极反应式: $\text{Ag} - \text{e}^- + \text{Cl}^- = \text{AgCl} \downarrow$
- 325 (✗) 氟磺酸(HSO_3F)与足量 NaOH 溶液反应: $\text{HSO}_3\text{F} + 3\text{OH}^- = \text{SO}_4^{2-} + \text{F}^- + 2\text{H}_2\text{O}$
- 326 (✗) 碳酸钠溶液中通入少量二氧化硫: $2\text{SO}_2 + \text{CO}_3^{2-} + \text{H}_2\text{O} = \text{CO}_2 + 2\text{HSO}_3^-$
- 327 (✗) 乙酰胺在足量盐酸中发生水解反应:

$$2\text{CH}_3\text{CONH}_2 + 2\text{H}_2\text{O} + \text{HCl} \xrightarrow{\Delta} \text{CH}_3\text{COONH}_4 + \text{NH}_4\text{Cl} + \text{CH}_3\text{COOH}$$
- 328 (✗) 洁厕灵与 84 消毒液不能混用的原因: $\text{Cl}^- + \text{ClO}^- + \text{H}_2\text{O} = \text{Cl}_2 \uparrow + 2\text{OH}^-$
- 329 (✗) 水杨酸与小苏打反应: 
- 330 (✓) 向 $\text{Fe}(\text{SCN})_3$ 溶液中滴加 NaCN 溶液: $\text{Fe}(\text{SCN})_3 + 6\text{CN}^- = \text{Fe}(\text{CN})_6^{3-} + 3\text{SCN}^-$
- 331 (✓) 碳酸氢铵稀溶液中加入足量烧碱溶液: $\text{HCO}_3^- + \text{NH}_4^+ + 2\text{OH}^- = \text{CO}_3^{2-} + \text{NH}_3 \cdot \text{H}_2\text{O} + \text{H}_2\text{O}$
- 332 (✗) $\text{Fe}(\text{NO}_3)_3$ 溶液中加入过量的 HI 溶液: $2\text{Fe}^{3+} + 2\text{I}^- = 2\text{Fe}^{2+} + \text{I}_2$
- 333 (✗) 用足量酸性 KMnO_4 溶液除甲醛: $2\text{MnO}_4^- + 5\text{HCHO} + 6\text{H}^+ = 5\text{HCOOH} + 3\text{H}_2\text{O} + 2\text{Mn}_2^+$
- 334 (✗) 用铁电极电解饱和食盐水, 阳极的电极反应为: $2\text{Cl}^- - 2\text{e}^- = \text{Cl}_2 \uparrow$
- 335 (✗) NH_4Cl 固体溶于重水: $\text{NH}_4^+ + \text{D}_2\text{O} \rightleftharpoons \text{NH}_3 \cdot \text{D}_2\text{O} + \text{H}^+$
- 336 (✗) $\text{NaAl}(\text{OH})_4$ 溶液中通入过量 CO_2 气体: $2[\text{Al}(\text{OH})_4]^- + \text{CO}_2 = 2\text{Al}(\text{OH})_3 \downarrow + \text{CO}_3^{2-} + \text{H}_2\text{O}$
- 337 (✗) Na_2S 溶液中加入稀硫酸: $\text{SO}_4^{2-} + 3\text{S}^{2-} + 8\text{H}^+ = 4\text{S} \downarrow + 4\text{H}_2\text{O}$
- 338 (✗) 阿司匹林与足量 NaOH 溶液共热: 
- 339 (✓) 硫酸酸化的 KI 溶液露置在空气中: $4\text{I}^- + \text{O}_2 + 4\text{H}^+ = 2\text{I}_2 + 2\text{H}_2\text{O}$
- 340 (✗) $\text{Fe}_2(\text{SO}_4)_3$ 溶液中通 H_2S 气体: $2\text{Fe}^{3+} + 3\text{H}_2\text{S} = \text{Fe}_2\text{S}_3 \downarrow + 6\text{H}^+$
- 341 (✓) $\text{Na}[\text{Al}(\text{OH})_4]$ 溶液中加入小苏打溶液: $[\text{Al}(\text{OH})_4]^- + \text{HCO}_3^- = \text{Al}(\text{OH})_3 \downarrow + \text{CO}_3^{2-} + \text{H}_2\text{O}$
- 342 (✗) 用 KMnO_4 固体和浓盐酸制备少量氯气: $2\text{KMnO}_4 + 16\text{H}^+ + 10\text{Cl}^- = 2\text{K}^+ + 2\text{Mn}^{2+} + 5\text{Cl}_2 \uparrow + 8\text{H}_2\text{O}$
- 343 (✗) 在亚硫酸中加入过量的次氯酸钠溶液: $\text{H}_2\text{SO}_3 + \text{ClO}^- = \text{Cl}^- + 2\text{H}^+ + \text{SO}_4^{2-}$
- 344 (✓) 向 KI 浓溶液中加入少量 FeCl_3 : $2\text{Fe}^{3+} + 3\text{I}^- = 2\text{Fe}^{2+} + \text{I}_3^-$
- 345 (✓) AgCl 固体溶于过量氨水: $\text{AgCl} + 2\text{NH}_3 \cdot \text{H}_2\text{O} = [\text{Ag}(\text{NH}_3)_2]^+ + \text{Cl}^- + 2\text{H}_2\text{O}$
- 346 (✗) 将 CO_2 通入饱和碳酸钠溶液中: $\text{CO}_3^{2-} + \text{CO}_2 + \text{H}_2\text{O} = 2\text{HCO}_3^-$
- 347 (✗) 酸性氯化亚铁溶液中加入双氧水: $2\text{Fe}^{2+} + \text{H}_2\text{O}_2 = 2\text{Fe}^{3+} + \text{O}_2 \uparrow + 2\text{H}^+$
- 348 (✗) 过量 SO_2 通入 Na_2CO_3 溶液中: $\text{SO}_2 + 2\text{CO}_3^{2-} + \text{H}_2\text{O} = 2\text{HCO}_3^- + \text{SO}_3^{2-}$

- 349 (✓) 向二元弱酸 H_3PO_3 溶液中滴入足量烧碱溶液: $\text{H}_3\text{PO}_3 + 2\text{OH}^- = \text{HPO}_3^{2-} + 2\text{H}_2\text{O}$
- 350 (✓) 向 $\text{Ba}(\text{OH})_2$ 溶液中滴加 NaHSO_4 溶液至完全沉淀: $\text{Ba}^{2+} + \text{OH}^- + \text{H}^+ + \text{SO}_4^{2-} = \text{BaSO}_4 \downarrow + \text{H}_2\text{O}$
- 351 (✓) Cl_2 通入水中: $\text{Cl}_2 + \text{H}_2\text{O} \rightleftharpoons \text{H}^+ + \text{Cl}^- + \text{HClO}$
- 352 (✓) XeF_2 和溴酸根溶液反应制备高溴酸根: $\text{XeF}_2 + \text{BrO}_3^- + \text{H}_2\text{O} \rightarrow \text{Xe} + \text{BrO}_4^- + 2\text{HF}$
- 353 (✓) 电合成己二腈的阴极反应: $2\text{CH}_2 = \text{CHCN} + 2\text{H}^+ + 2\text{e}^- = \text{NC}(\text{CH}_2)_4\text{CN}$
- 354 (✓) 软脂酸的燃烧反应: $\text{CH}_3(\text{CH}_2)_{14}\text{COOH} + 23\text{O}_2 \rightarrow 16\text{H}_2\text{O} + 16\text{CO}_2$
- 355 (✗) 天然橡胶的合成: $n\text{CH}_2 = \text{CH}-\text{CH} = \text{CH}_2 \xrightarrow{\text{催化剂}} \left[\begin{array}{c} \text{CH}_2 \quad \text{CH}_2 \\ | \quad \quad | \\ \text{C} = \text{C} \\ | \quad \quad | \\ \text{H} \quad \quad \text{H} \end{array} \right]_n$
- 356 (✗) 将少量 NaAlO_2 溶液滴入 $\text{Ca}(\text{HCO}_3)_2$ 溶液中: $\text{AlO}_2^- + \text{HCO}_3^- + \text{H}_2\text{O} = \text{Al}(\text{OH})_3 \downarrow + \text{CO}_3^{2-}$
- 357 (✓) 高炉炼铁的主要反应: $\text{Fe}_2\text{O}_3 + 3\text{CO} \xrightleftharpoons{\text{高温}} 2\text{Fe} + 3\text{CO}_2$
- 358 (✓) R_3N (R 代表烷基) 在水中可能存在平衡: $\text{R}_3\text{N} + \text{H}_2\text{O} \rightleftharpoons \text{R}_3\text{NH}^+ + \text{OH}^-$
- 359 (✗) HSO_3X (X 代表卤素) 与足量氢氧化钠溶液反应: $\text{HSO}_3\text{X} + 3\text{OH}^- = \text{SO}_4^{2-} + \text{X}^- + 2\text{H}_2\text{O}$
- 360 (✓) 蓝铜矿[主要成分为 $2\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$]与焦炭反应:
 $2[\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2] + 3\text{C} \xrightarrow{\Delta} 6\text{Cu} + 7\text{CO}_2 \uparrow + 2\text{H}_2\text{O}$
- 361 (✗) 用醋酸和淀粉-KI 溶液检验加碘盐中的 IO_3^- : $\text{IO}_3^- + 5\text{I}^- + 6\text{H}^+ = 3\text{I}_2 + 3\text{H}_2\text{O}$
- 362 (✗) NaHCO_3 溶液与少量 $\text{Ba}(\text{OH})_2$ 溶液混合: $\text{HCO}_3^- + \text{Ba}^{2+} + \text{OH}^- = \text{BaCO}_3 \downarrow + \text{H}_2\text{O}$
- 363 (✗) 硝酸工业中 NH_3 的氧化反应: $4\text{NH}_3 + 3\text{O}_2 \xrightarrow[\Delta]{\text{催化剂}} \text{N}_2 + 6\text{H}_2\text{O}$
- 364 (✓) 食醋除水垢: $2\text{CH}_3\text{COOH} + \text{CaCO}_3 = 2\text{CH}_3\text{COO}^- + \text{Ca}^{2+} + \text{H}_2\text{O} + \text{CO}_2 \uparrow$
- 365 (✓) 用电子式表示 MgBr_2 的形成: $:\ddot{\text{Br}}: + \overset{\times}{\times}\text{Mg}^{\times+} + :\ddot{\text{Br}}: \rightarrow [:\ddot{\text{Br}}^{\times}]^- \text{Mg}^{2+} [^{\times}\ddot{\text{Br}}:]^-$
- 366 (✗) 邻羟甲基苯酚脱水缩合: $n \text{C}_6\text{H}_4(\text{OH})(\text{CH}_2\text{OH}) \xrightarrow[\Delta]{\text{H}^+} \text{H} \left[\text{O}-\text{C}_6\text{H}_4-\text{CH}_2 \right]_n \text{OH} + (n-1)\text{H}_2\text{O}$
- 367 (✓) 将少量氯气通入过量 Na_2SO_3 溶液中: $\text{Cl}_2 + 3\text{SO}_3^{2-} + \text{H}_2\text{O} = 2\text{Cl}^- + 2\text{HSO}_3^- + \text{SO}_4^{2-}$
- 368 (✗) 铅酸蓄电池放电时正极的电极反应式: $\text{PbO}_2 + 4\text{H}^+ + 2\text{e}^- = \text{Pb}^{2+} + 2\text{H}_2\text{O}$
- 369 (✗) 邻羟基苯甲醛中加入足量浓溴水: $\text{C}_6\text{H}_4(\text{OH})(\text{CHO}) + 2\text{Br}_2 \rightarrow \text{C}_6\text{H}_2(\text{OH})(\text{CHO})(\text{Br})_2 + 2\text{H}^+ + 2\text{Br}^-$
- 370 (✓) 红热的铁与水蒸气生成磁性氧化铁: $3\text{Fe} + 4\text{H}_2\text{O}(\text{g}) \xrightarrow{\text{高温}} \text{Fe}_3\text{O}_4 + 4\text{H}_2$
- 371 (✗) 铝热反应的原理: $\text{Al}_2\text{O}_3 + 2\text{Fe} \xrightarrow{\text{高温}} 2\text{Al} + \text{Fe}_2\text{O}_3$
- 372 (✓) 电合成己二腈的阴极反应: $2\text{CH}_2 = \text{CHCN} + 2\text{H}^+ + 2\text{e}^- \rightarrow \text{NC}(\text{CH}_2)_4\text{CN}$
- 373 (✓) 液态肼的燃烧: $\text{N}_2\text{H}_4(\text{l}) + \text{O}_2(\text{g}) \rightarrow \text{N}_2(\text{g}) + 2\text{H}_2\text{O}(\text{l})$
- 374 (✗) 25°C 和 101kPa 下, HF 和 NaOH 的反应:
 $\text{HF}(\text{aq}) + \text{NaOH}(\text{aq}) \rightarrow \text{NaF}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \Delta H = -57.3\text{kJ} \cdot \text{mol}^{-1}$
- 375 (✗) 保存 FeCl_2 溶液加入少量铁粉的原因: $\text{Fe} + \text{Fe}^{3+} = 2\text{Fe}^{2+}$
- 376 (✓) NaAlO_2 溶液中通入过量 CO_2 : $\text{AlO}_2^- + \text{CO}_2 + 2\text{H}_2\text{O} = \text{Al}(\text{OH})_3 \downarrow + \text{HCO}_3^-$

- 377 (×) $\text{CH}_3\text{CH}_2\text{Br}$ 与 NaOH 溶液共热反应: $\text{CH}_3\text{CH}_2\text{Br} + \text{NaOH} \xrightarrow{\Delta} \text{CH}_2 = \text{CH}_2 \uparrow + \text{NaBr} + \text{H}_2\text{O}$
- 378 (×) 铜与浓硫酸加热: $\text{Cu} + 4\text{H}^+ + \text{SO}_4^{2-} \xrightarrow{\Delta} \text{Cu}^{2+} + \text{SO}_2 \uparrow + 2\text{H}_2\text{O}$
- 379 (√) FeI_2 溶液中通入少量 Cl_2 : $2\text{I}^- + \text{Cl}_2 = \text{I}_2 + 2\text{Cl}^-$
- 380 (×) NaHCO_3 溶液与过量 $\text{Ba}(\text{OH})_2$: $2\text{HCO}_3^- + \text{Ba}^{2+} + 2\text{OH}^- = \text{BaCO}_3 \downarrow + \text{CO}_3^{2-} + 2\text{H}_2\text{O}$
- 381 (√) Na_2CO_3 溶液与足量 $\text{C}_6\text{H}_5\text{OH}$ 反应: $\text{CO}_3^{2-} + \text{C}_6\text{H}_5\text{OH} \rightarrow \text{C}_6\text{H}_5\text{O}^- + \text{HCO}_3^-$
- 382 (√) 过量 Fe 粉加入稀硝酸中: $3\text{Fe} + 8\text{H}^+ + 2\text{NO}_3^- = 3\text{Fe}^{2+} + 2\text{NO} \uparrow + 4\text{H}_2\text{O}$
- 383 (√) Al 与 NaOH 溶液反应: $2\text{Al} + 2\text{OH}^- + 6\text{H}_2\text{O} = 2[\text{Al}(\text{OH})_4]^- + 3\text{H}_2 \uparrow$
- 384 (×) 用石墨电极电解稀 NaCl 溶液: $2\text{Na}^+ + 2\text{Cl}^- \xrightarrow{\text{通电}} 2\text{Na} + \text{Cl}_2 \uparrow$
- 385 (×) 向 NaHS 溶液中滴加少量 CuSO_4 溶液: $\text{Cu}^{2+} + \text{HS}^- = \text{CuS} \downarrow + \text{H}^+$
- 386 (×) 用硝酸溶液溶解 FeS : $\text{FeS} + 2\text{H}^+ = \text{Fe}^{2+} + \text{H}_2\text{S} \uparrow$
- 387 (×) 往 Na_2CO_3 溶液中滴入少量盐酸: $\text{CO}_3^{2-} + 2\text{H}^+ = \text{CO}_2 \uparrow + \text{H}_2\text{O}$
- 388 (√) 往 $\text{Ca}(\text{ClO})_2$ 溶液中通入足量 CO_2 : $\text{ClO}^- + \text{CO}_2 + \text{H}_2\text{O} = \text{HClO} + \text{HCO}_3^-$
- 389 (×) 足量镁粉与 FeCl_3 溶液反应: $\text{Mg} + 2\text{Fe}^{3+} = \text{Mg}^{2+} + 2\text{Fe}^{2+}$
- 390 (√) 醋酸铵水解: $\text{CH}_3\text{COO}^- + \text{NH}_4^+ + \text{H}_2\text{O} \rightleftharpoons \text{CH}_3\text{COOH} + \text{NH}_3 \cdot \text{H}_2\text{O}$
- 391 (×) 将少量 CO_2 通入饱和 Na_2CO_3 溶液: $\text{CO}_2 + \text{CO}_3^{2-} + \text{H}_2\text{O} = 2\text{HCO}_3^-$
- 392 (√) 向氯化铝溶液中加入过量氨水: $\text{Al}^{3+} + 3\text{NH}_3 \cdot \text{H}_2\text{O} = \text{Al}(\text{OH})_3 \downarrow + 3\text{NH}_4^+$
- 393 (×) 用氢氟酸刻蚀玻璃: $\text{SiO}_3^{2-} + 4\text{F}^- + 6\text{H}^+ = \text{SiF}_4 \uparrow + 3\text{H}_2\text{O}$
- 394 (√) 用饱和碳酸钠溶液浸泡锅炉水垢中的硫酸钙: $\text{CaSO}_4(\text{s}) + \text{CO}_3^{2-}(\text{aq}) \rightleftharpoons \text{CaCO}_3(\text{s}) + \text{SO}_4^{2-}(\text{aq})$
- 395 (×) 酸催化条件下制酚醛树脂: $n \text{ OH} + n \text{ H}-\overset{\text{O}}{\parallel}{\text{C}}-\text{H} \xrightarrow[\Delta]{\text{H}^+} (n-1)\text{H}_2\text{O} + \text{H} \left[\text{C}_6\text{H}_3(\text{OH})_2-\text{CH}_2 \right]_n \text{OH}$
- 396 (×) 要注入炽热铁水的模具必须干燥的原因: $2\text{Fe} + 6\text{H}_2\text{O}(\text{g}) \xrightarrow{\text{高温}} 2\text{Fe}(\text{OH})_3 + 3\text{H}_2$
- 397 (×) 铜与浓硫酸(98.3%)加热下反应: $\text{Cu} + 2\text{H}_2\text{SO}_4(\text{浓}) \xrightarrow{\Delta} \text{Cu}^{2+} + \text{SO}_4^{2-} + \text{SO}_2 \uparrow + 2\text{H}_2\text{O}$
- 398 (√) 用惰性电极电解饱和 ZnCl_2 溶液: $\text{Zn}^{2+} + 2\text{Cl}^- + 2\text{H}_2\text{O} \xrightarrow{\text{通电}} \text{Zn}(\text{OH})_2 \downarrow + \text{Cl}_2 \uparrow + \text{H}_2 \uparrow$
- 399 (×) 向含 $0.1\text{mol}[\text{Co}(\text{NH}_3)\text{Cl}]\text{Cl}_2$ 的溶液中加入含 $0.3\text{mol} \text{AgNO}_3$ 的溶液:
 $[\text{Co}(\text{NH}_3)_5\text{Cl}]^{2+} + 2\text{Cl}^- + 3\text{Ag}^+ = [\text{Co}(\text{NH}_3)_5]^{3+} + 3\text{AgCl} \downarrow$
- 400 (√) 电解饱和 NaCl 溶液的阴极反应: $2\text{H}_2\text{O} + 2\text{e}^- = \text{H}_2 \uparrow + 2\text{OH}^-$
- 401 (√) 甲醛和 $\text{CH}_3\text{CH}_2\text{MgCl}$ 的反应: $\text{HCHO} + \text{CH}_3\text{CH}_2\text{MgCl} \rightarrow \text{CH}_3\text{CH}_2\text{CH}_2\text{OMgCl}$
- 402 (×) 钠与硫酸铜溶液的反应: $2\text{Na} + \text{CuSO}_4 = \text{Cu} + \text{Na}_2\text{SO}_4$
- 403 (√) Na_2O_2 与 Fe_2O_3 共熔的反应: $\text{Fe}_2\text{O}_3 + 3\text{Na}_2\text{O}_2 \xrightarrow{\text{熔融}} 2\text{Na}_2\text{FeO}_4 + \text{Na}_2\text{O}$
- 404 (×) Na_2S 溶液和硝酸混合: $\text{S}^{2-} + 2\text{H}^+ = \text{H}_2\text{S} \uparrow$
- 405 (×) 向 NaClO 溶液中通入少量 SO_2 : $\text{ClO}^- + \text{SO}_2 + \text{H}_2\text{O} = \text{SO}_4^{2-} + 2\text{H}^+ + \text{Cl}^-$
- 406 (×) 向 AgCl 悬浊液中通入 H_2S 气体: $2\text{AgCl} + \text{S}^{2-} = \text{Ag}_2\text{S} + 2\text{Cl}^-$
- 407 (×) 向 $\text{Ca}(\text{ClO})_2$ 溶液中通入少量的 SO_2 : $\text{Ca}^{2+} + \text{H}_2\text{O} + \text{SO}_2 = \text{Cl}^- + \text{CaSO}_4 \downarrow + 2\text{H}^+$
- 408 (√) 含 $\text{CO}(\text{NH}_2)_2$ 的碱性废水无害化处理的阳极反应: $\text{CO}(\text{NH}_2)_2 - 6\text{e}^- + 8\text{OH}^- = \text{N}_2 \uparrow + \text{CO}_3^{2-} + 6\text{H}_2\text{O}$
- 409 (×) Fe 与 HCN 溶液反应: $\text{Fe} + 2\text{HCN} = \text{H}_2 \uparrow + \text{Fe}^{2+} + 2\text{CN}^-$

- 410 (×) Al(OH)_3 (一元弱酸) 的酸式电离方程式: $\text{Al(OH)}_3 + \text{H}_2\text{O} = [\text{Al(OH)}_4]^- + \text{H}^+$
- 411 (√) Cl_2 与足量潮湿的 Na_2CO_3 反应生成 Cl_2O : $2\text{Cl}_2 + 2\text{Na}_2\text{CO}_3 + \text{H}_2\text{O} = \text{Cl}_2\text{O} + 2\text{NaCl} + 2\text{NaHCO}_3$
- 412 (×) CH_3CONH_2 与足量的盐酸反应: $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{NH}_2 + \text{HCl} \xrightarrow{\Delta} \text{CH}_3\text{COCl} + \text{NH}_3$
- 413 (×) 向 AgNO_3 溶液中加入少量 NaHS 溶液: $2\text{Ag}^+ + \text{S}^{2-} = \text{Ag}_2\text{S} \downarrow$
- 414 (√) 用饱和碳酸钠溶液浸泡锅炉水垢中的硫酸钙: $\text{CaSO}_4 + \text{CO}_3^{2-} \rightleftharpoons \text{CaCO}_3 + \text{SO}_4^{2-}$
- 415 (√) 向 $\text{Na}[\text{Al(OH)}_4]$ 溶液中通入过量 CO_2 气体: $[\text{Al(OH)}_4]^- + \text{CO}_2 = \text{Al(OH)}_3 \downarrow + \text{HCO}_3^-$
- 416 (×) 将少量 SO_2 通入硝酸钡溶液中: $3\text{SO}_2 + \text{Ba}^{2+} + 2\text{NO}_3^- + 2\text{H}_2\text{O} = \text{BaSO}_4 \downarrow + 2\text{NO} + 4\text{H}^+ + 2\text{SO}_4^{2-}$
- 417 (×) 将过氧化钠固体投入 H_2^{18}O 中: $2\text{Na}_2\text{O}_2 + 2\text{H}_2^{18}\text{O} = 4\text{Na}^+ + 4\text{OH}^- + 18\text{O}_2$
- 418 (×) 向偏铝酸钠溶液中通入少量二氧化碳: $\text{AlO}_2^- + \text{CO}_2 + 2\text{H}_2\text{O} = \text{Al(OH)}_3 \downarrow + \text{HCO}_3^-$
- 419 (×) 铅蓄电池充电时的阳极反应式: $\text{Pb}^{2+} - 2\text{e}^- + 2\text{H}_2\text{O} = \text{PbO}_2 + 4\text{H}^+$
- 420 (×) 氯气与水反应: $\text{Cl}_2 + \text{H}_2\text{O} \rightleftharpoons 2\text{H}^+ + \text{Cl}^- + \text{ClO}^-$
- 421 (×) 硫酸铝溶液与足量碳酸氢钠溶液混合: $\text{Al}^{3+} + \text{HCO}_3^- + \text{H}_2\text{O} = \text{Al(OH)}_3 \downarrow + \text{CO}_3^{2-}$
- 422 (√) 焦炭与二氧化硅在高温下反应: $2\text{C} + \text{SiO}_2 \xrightarrow{\text{高温}} 2\text{CO} \uparrow + \text{Si}$
- 423 (√) KClO_3 与浓盐酸反应: $\text{KClO}_3 + 6\text{HCl} = \text{KCl} + 3\text{Cl}_2 \uparrow + 3\text{H}_2\text{O}$
- 424 (√) 三氧化硫与氯化钡溶液生成沉淀的反应: $\text{SO}_3 + \text{Ba}^{2+} + \text{H}_2\text{O} = \text{BaSO}_4 \downarrow + 2\text{H}^+$
- 425 (×) 双氧水溶液中滴加碘化钠溶液: $2\text{I}^- + 2\text{H}_2\text{O}_2 = \text{I}_2 + 2\text{H}_2\text{O} + \text{O}_2$
- 426 (√) 二氧化硅和氢氧化钠溶液反应: $\text{SiO}_2 + 2\text{OH}^- = \text{SiO}_3^{2-} + \text{H}_2\text{O}$
- 427 (×) 鸡蛋壳浸泡在醋酸溶液中: $\text{CaCO}_3 + 2\text{H}^+ = \text{Ca}^{2+} + \text{CO}_2 \uparrow + \text{H}_2\text{O}$
- 428 (×) 将 H_2O_2 滴入酸性 KMnO_4 溶液中: $2\text{MnO}_4^- + 10\text{H}^+ + 3\text{H}_2\text{O}_2 = 2\text{Mn}^{2+} + 3\text{O}_2 \uparrow + 8\text{H}_2\text{O}$
- 429 (×) 用 FeS 除去工业废水中的 Pb^{2+} : $\text{Pb}^{2+} + \text{S}^{2-} = \text{PbS} \downarrow$
- 430 (√) 酸性条件下 NO_3^- 电催化为 N_2 的阴极反应: $2\text{NO}_3^- + 12\text{H}^+ + 10\text{e}^- = \text{N}_2 \uparrow + 6\text{H}_2\text{O}$
- 431 (√) 过量 SO_2 与 CuCl_2 溶液反应: $\text{SO}_2 + 2\text{CuCl}_2 + 2\text{H}_2\text{O} = 2\text{CuCl} \downarrow + \text{H}_2\text{SO}_4 + 2\text{HCl}$
- 432 (×) SO_2 通入 I_2 水溶液中: $\text{SO}_2 + \text{I}_2 + 2\text{H}_2\text{O} = 2\text{H}^+ + \text{SO}_4^{2-} + 2\text{HI}$
- 433 (√) 一元弱酸 H_3BO_3 电离方程: $\text{H}_3\text{BO}_3 + \text{H}_2\text{O} \rightleftharpoons [\text{B(OH)}_4]^- + \text{H}^+$
- 434 (×) 氯乙酸乙酯在足量 NaOH 溶液中加热: $\text{ClCH}_2\text{COOC}_2\text{H}_5 + \text{OH}^- \longrightarrow \text{ClCH}_2\text{COO}^- + \text{C}_2\text{H}_5\text{OH}$
- 435 (×) 少量 SO_2 通入苯酚钠溶液中: $\text{C}_6\text{H}_5\text{O}^- + \text{SO}_2 + \text{H}_2\text{O} = \text{C}_6\text{H}_5\text{OH} + \text{HSO}_3^-$ (已知: H_2SO_3 的 $\text{K}_{a1} = 1.4 \times 10^{-2}$, $\text{K}_{a2} = 1.0 \times 10^{-7}$, 苯酚的 $\text{K}_a = 1.0 \times 10^{-10}$)
- 436 (√) 向 $\text{Cu(NH}_3)_4\text{SO}_4$ 溶液中滴加过量的硫酸: $[\text{Cu(NH}_3)_4]^{2+} + 4\text{H}^+ = \text{Cu}^{2+} + 4\text{NH}_4^+$
- 437 (×) 用 Na_2CO_3 溶液将水垢中的 CaSO_4 转化为溶于酸的 CaCO_3 : $\text{Ca}^{2+} + \text{CO}_3^{2-} = \text{CaCO}_3 \downarrow$
- 438 (√) 硫酸铁溶液中滴加少量亚硫酸钠溶液: $2\text{Fe}^{3+} + \text{SO}_3^{2-} + \text{H}_2\text{O} = 2\text{Fe}^{2+} + \text{SO}_4^{2-} + 2\text{H}^+$
- 439 (√) 向 CuSO_4 溶液中加入 Na_2O_2 : $2\text{Na}_2\text{O}_2 + 2\text{Cu}^{2+} + 2\text{H}_2\text{O} = 4\text{Na}^+ + 2\text{Cu(OH)}_2 \downarrow + \text{O}_2 \uparrow$
- 440 (√) NaHCO_3 溶液中加足量 Ba(OH)_2 溶液: $\text{HCO}_3^- + \text{Ba}^{2+} + \text{OH}^- = \text{BaCO}_3 \downarrow + \text{H}_2\text{O}$