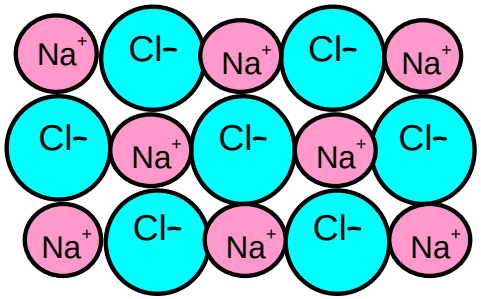
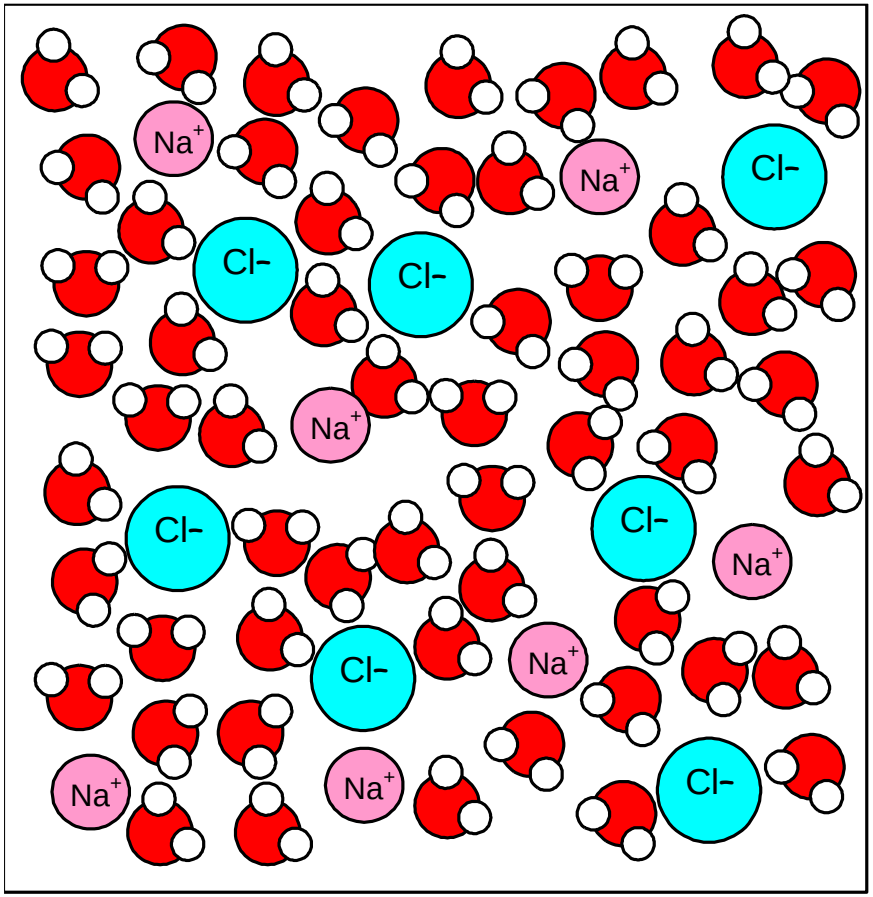
WWW.CHEMSHEETS.CO.UK

IONIC EQUATIONS

When an IONIC substance dissolves, the ions separate and mix in with the water:

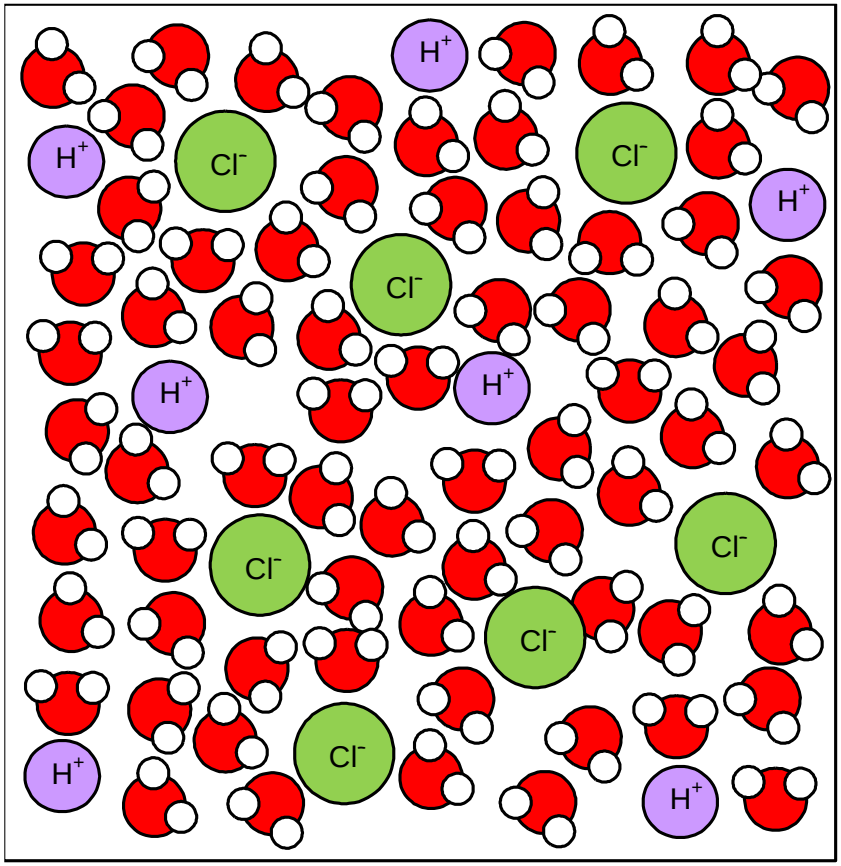


NaCl(s)

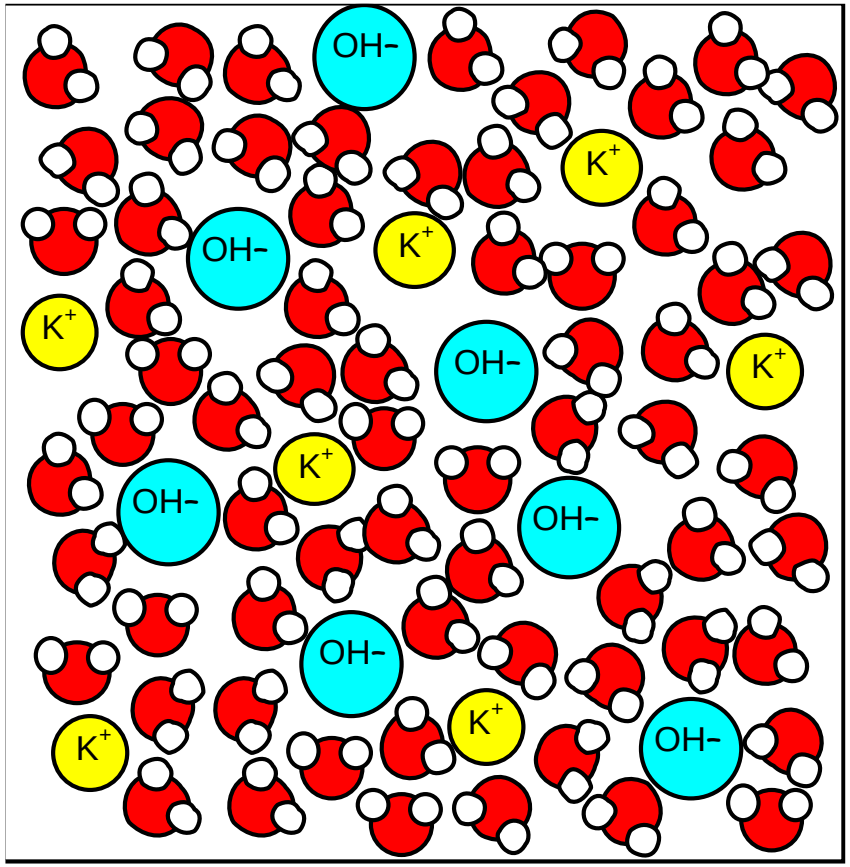


NaCl(aq)

ACID + ALKALI

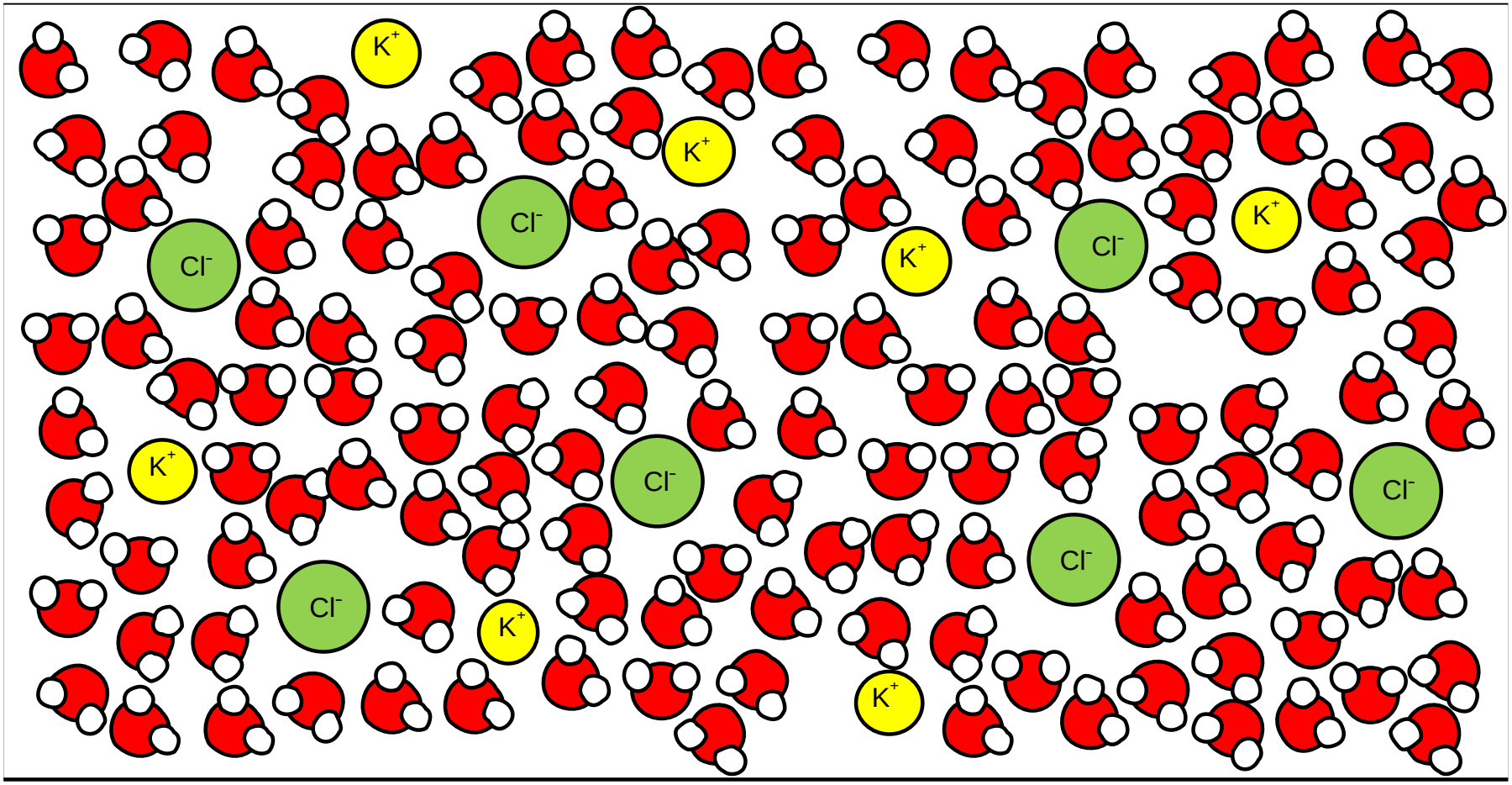


HCl(aq)



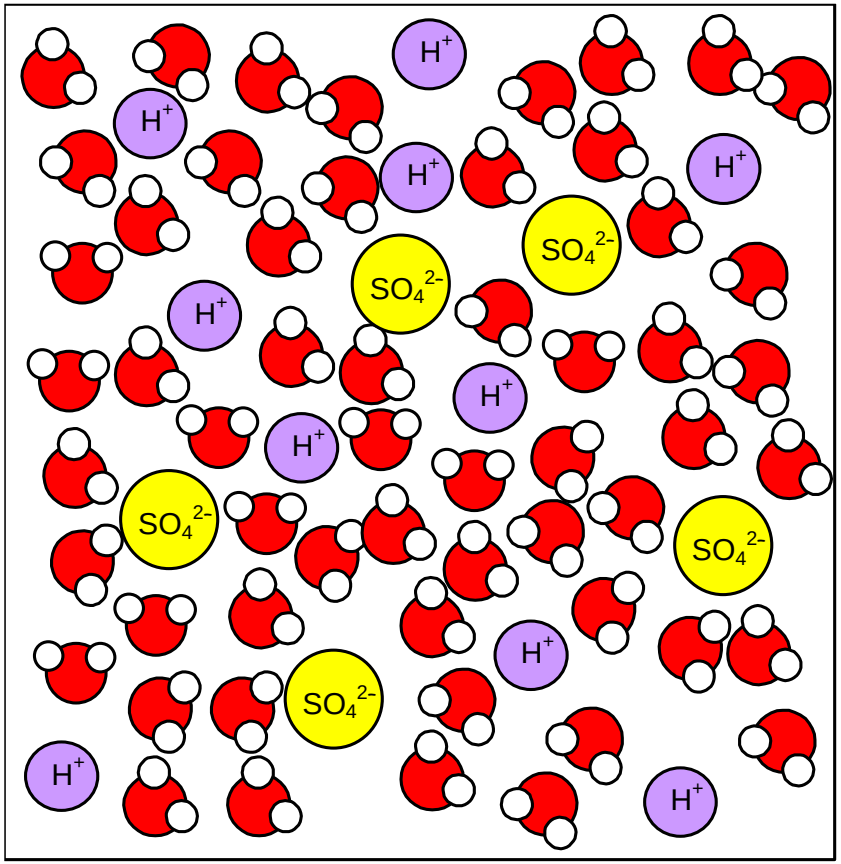
KOH(aq)

ACID + ALKALI

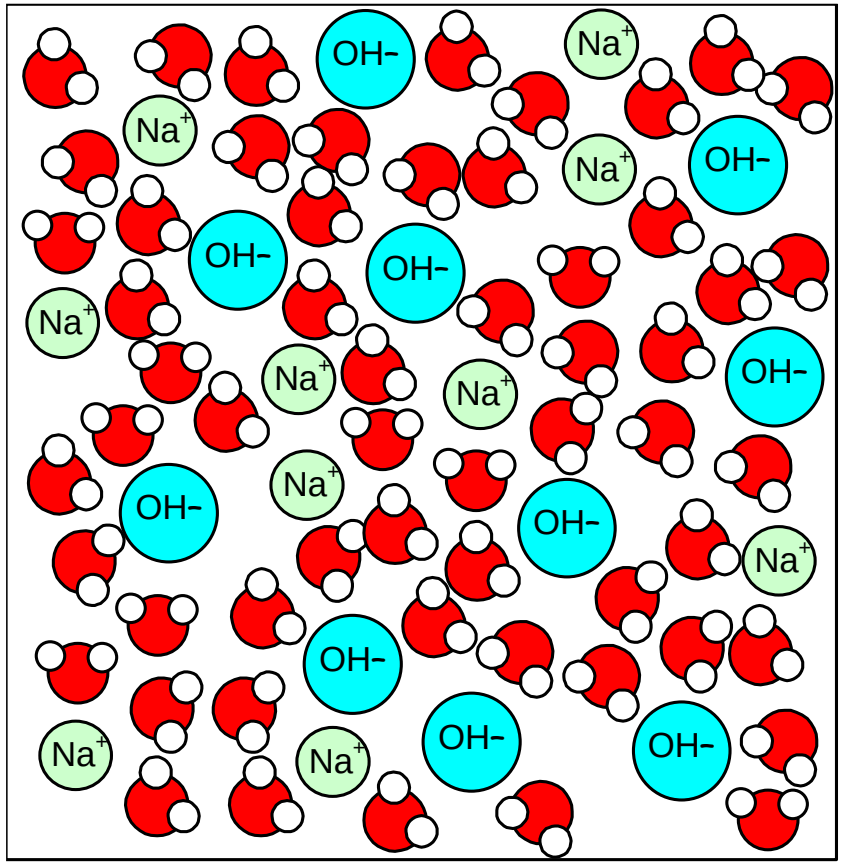


$$H^+(aq) + OH^-(aq) \rightarrow H_2O(l)$$

ACID + ALKALI

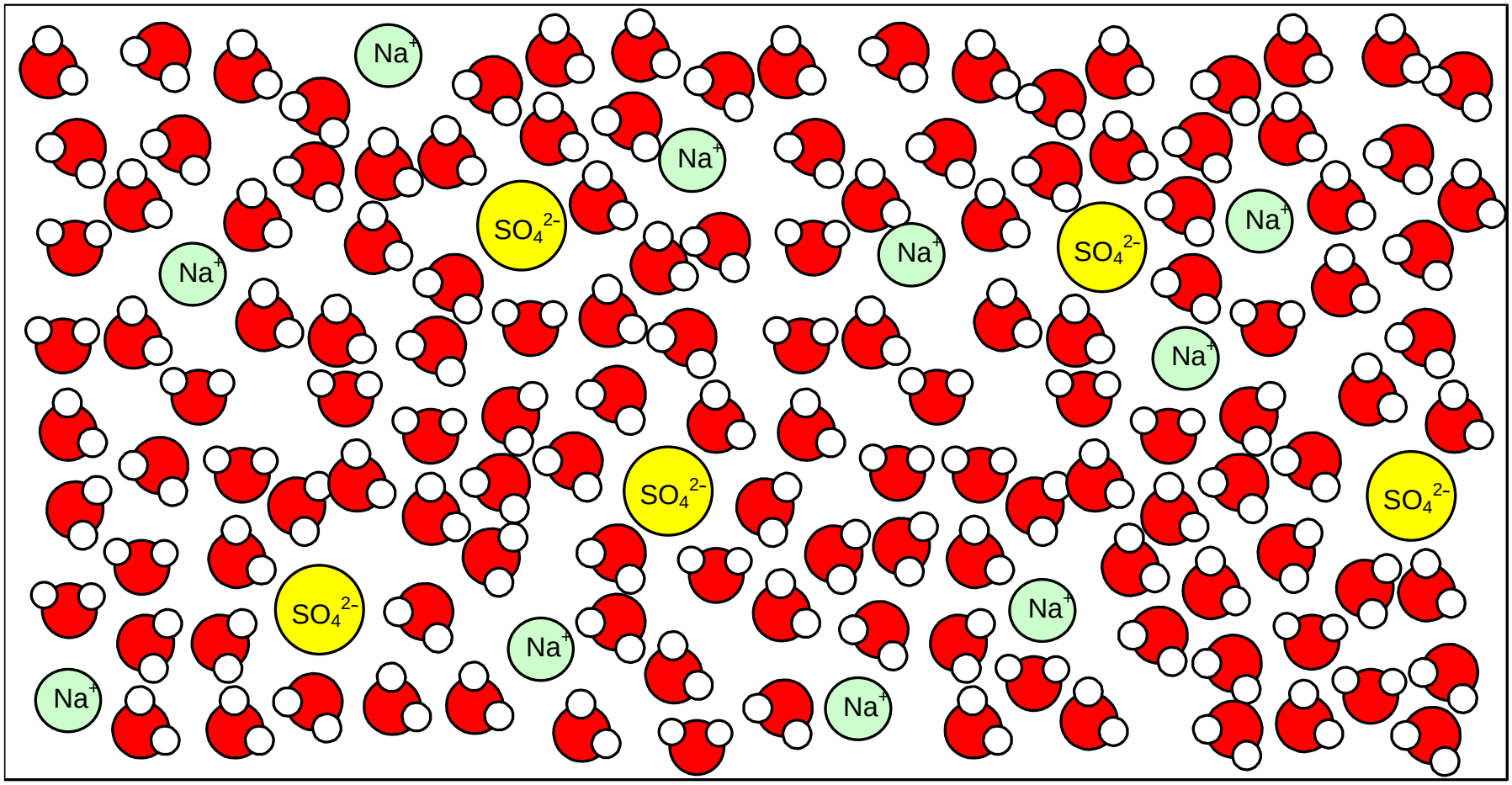


$H_2SO_4(aq)$



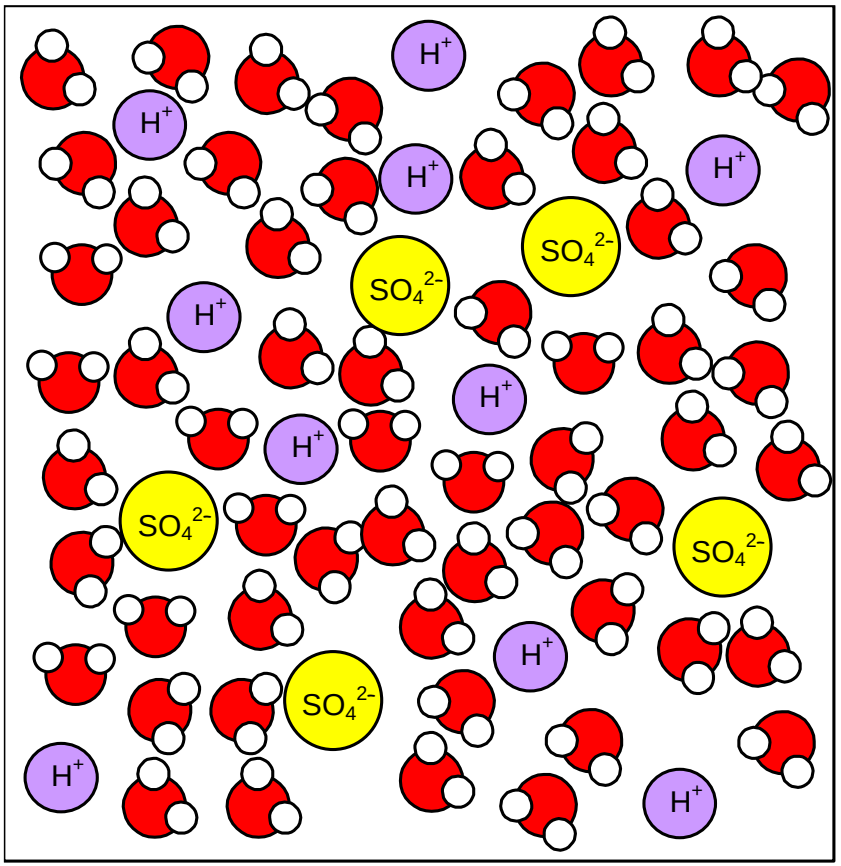
$NaOH(aq)$

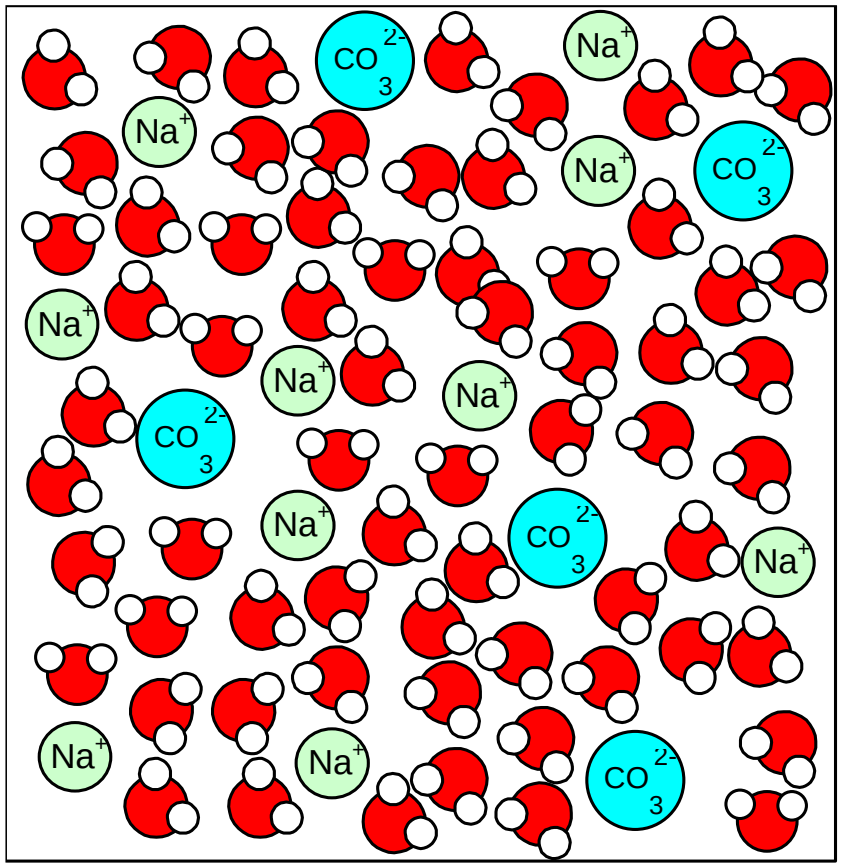
ACID + ALKALI



$$H^+(aq) + OH^-(aq) \rightarrow H_2O(l)$$

ACID + CARBONATE

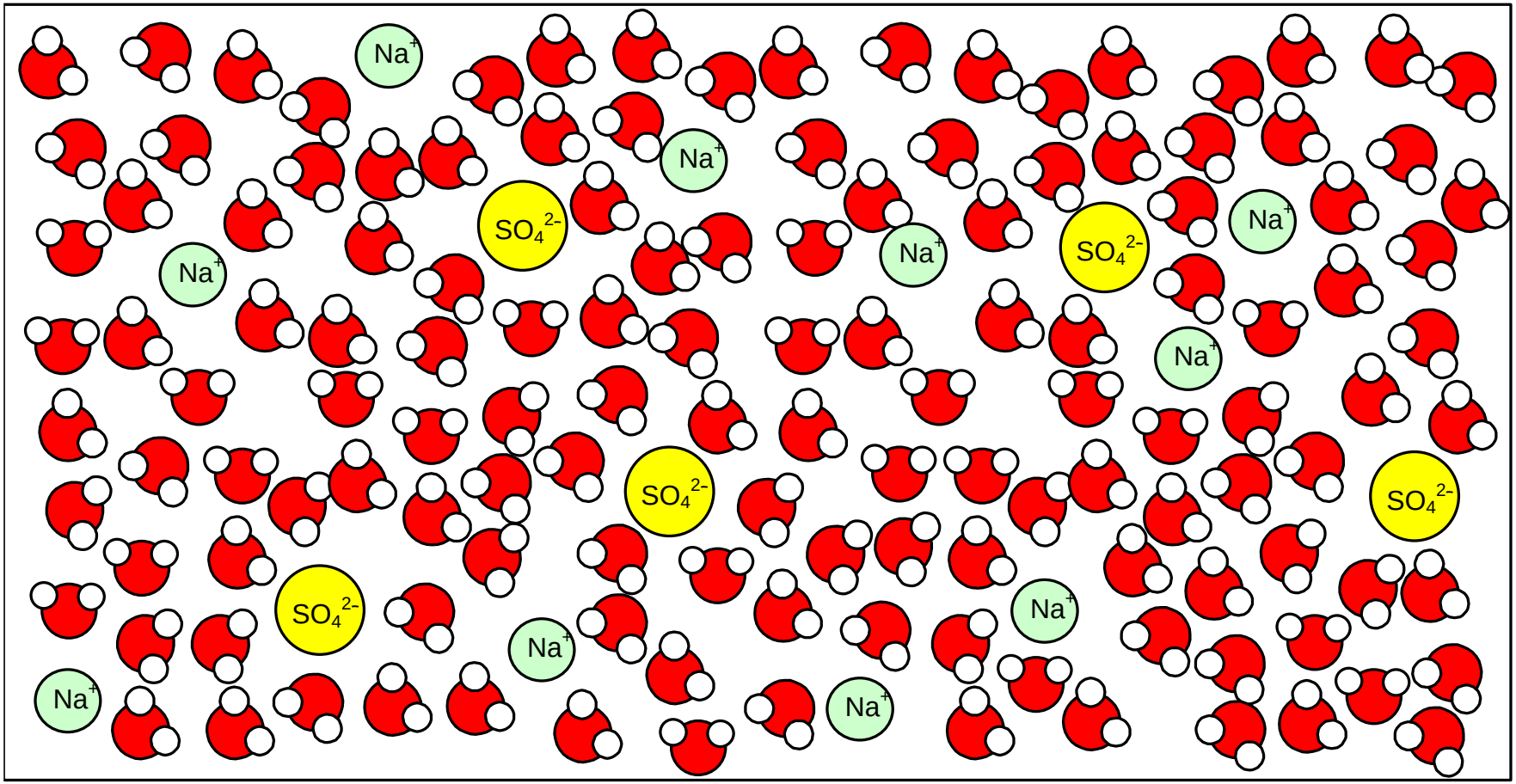




$H_2SO_4(aq)$

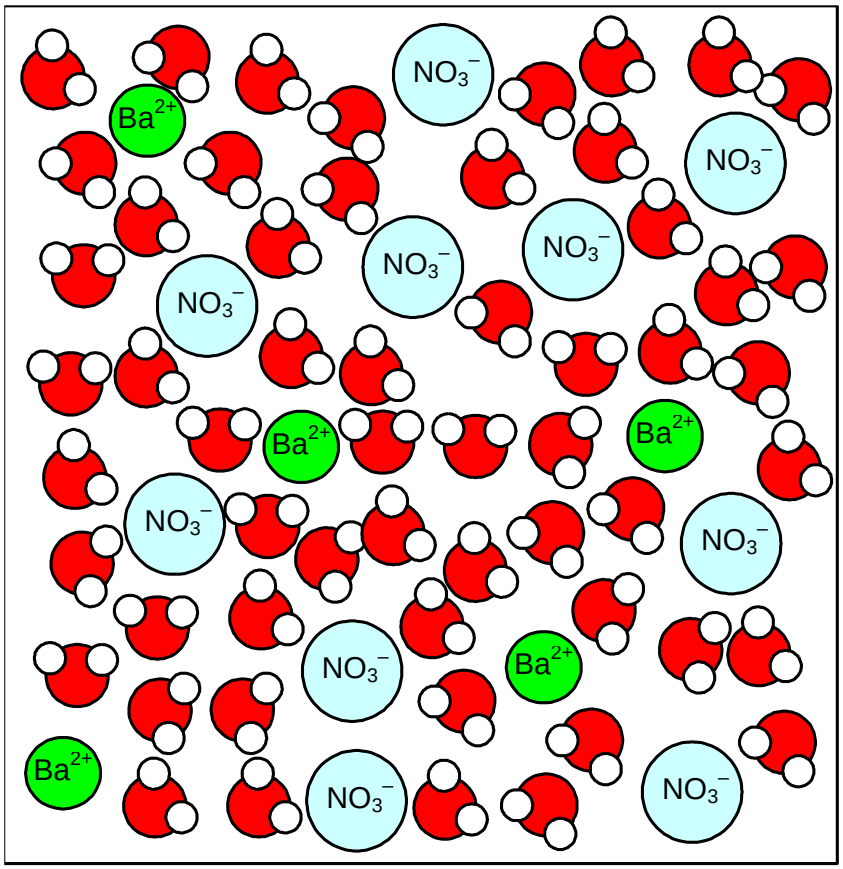
$Na_2CO_3(aq)$

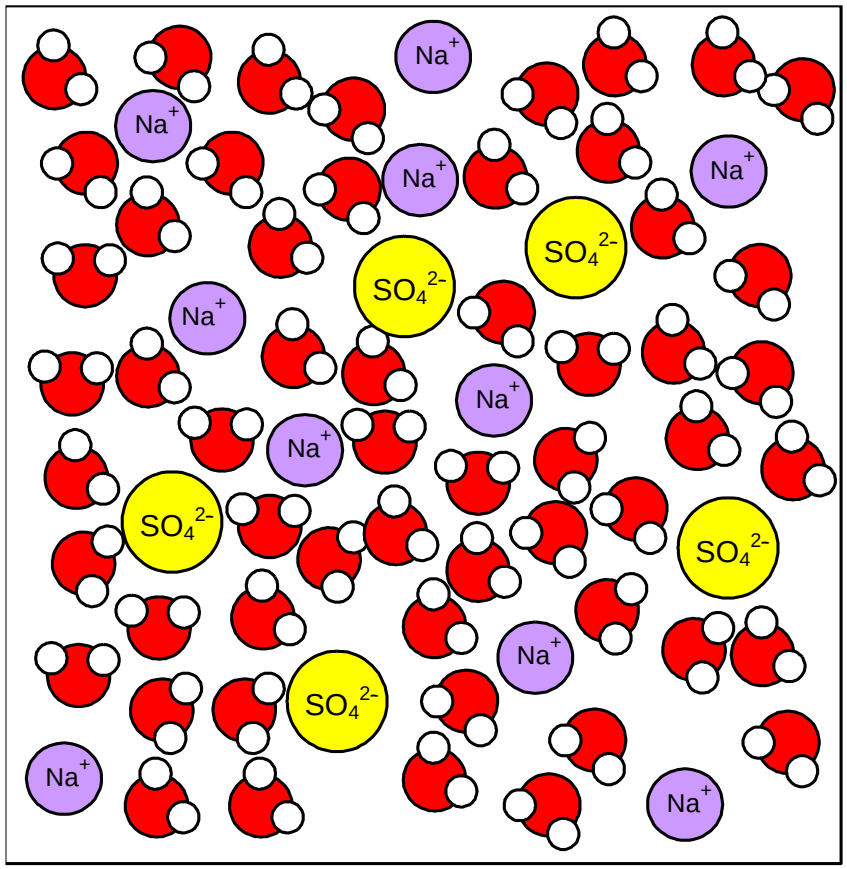
ACID + CARBONATE



$$2\ H^+(aq) + CO_3^{2-}(aq) \rightarrow H_2O(l) + CO_2(g)$$

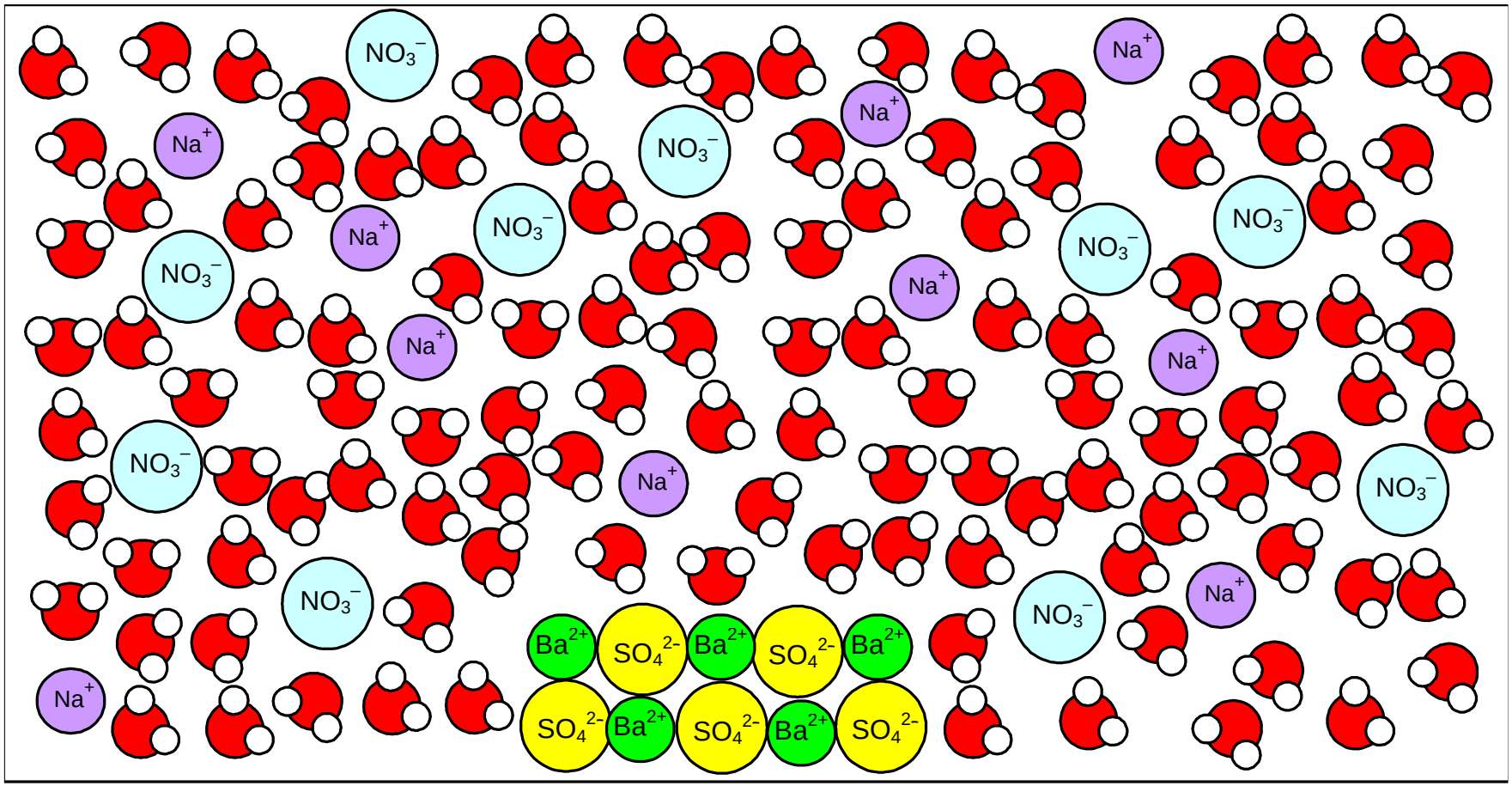
PRECIPITATION REACTION





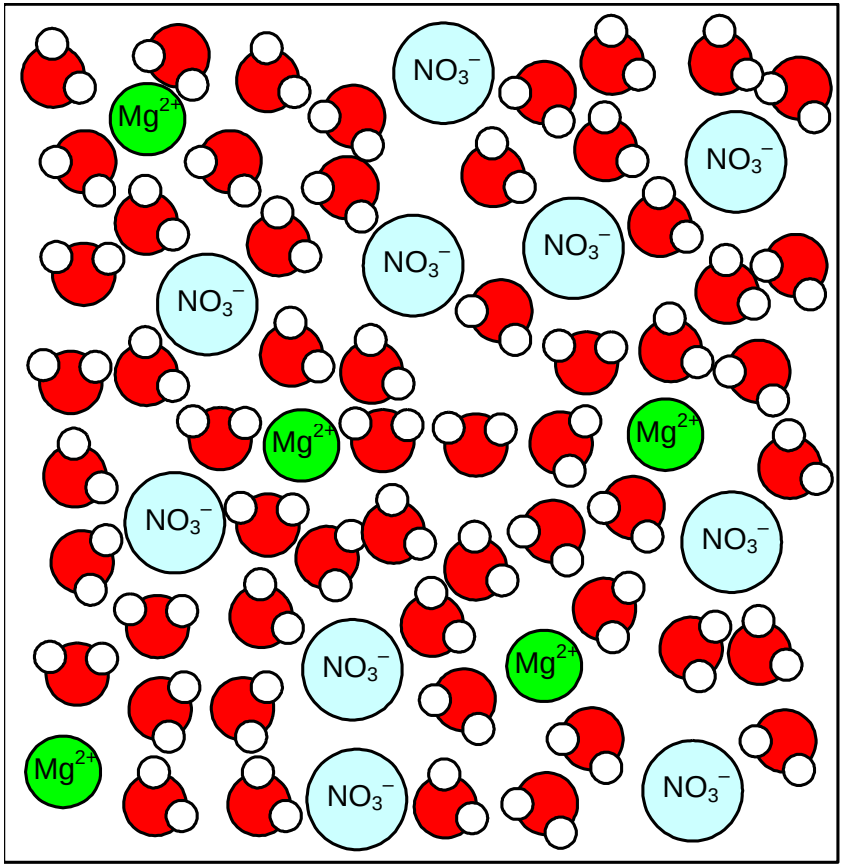
$Ba(NO_3)_2(aq)$ $Na_2SO_4(aq)$

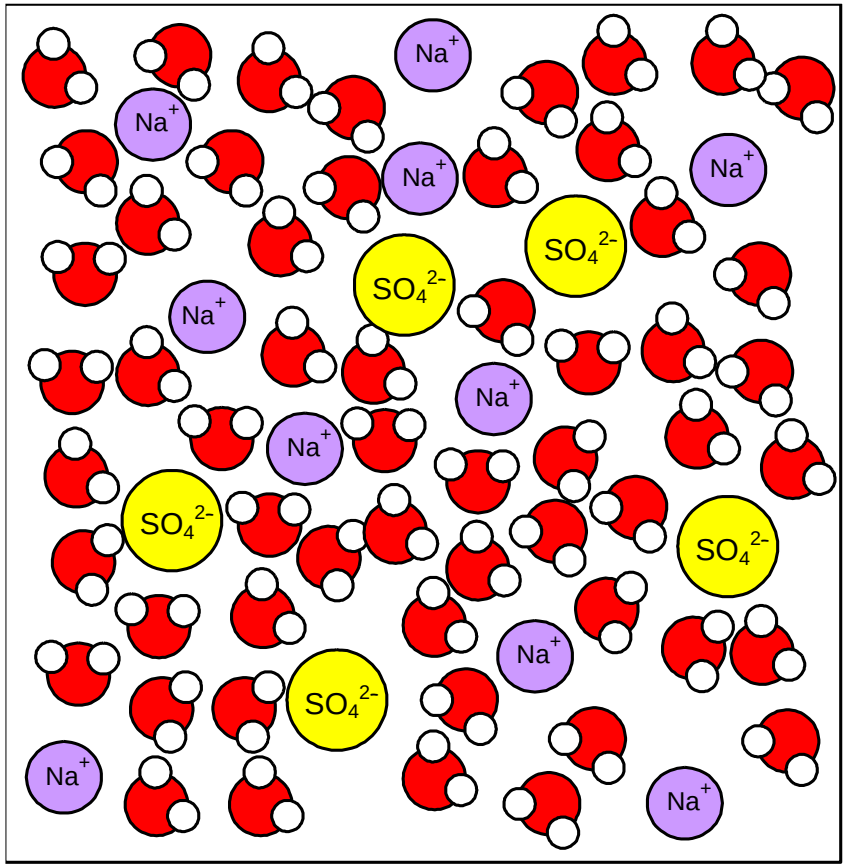
PRECIPITATION REACTION



$$Ba^{2+}(aq) + SO_4^{2-}(aq) \rightarrow BaSO_4(s)$$

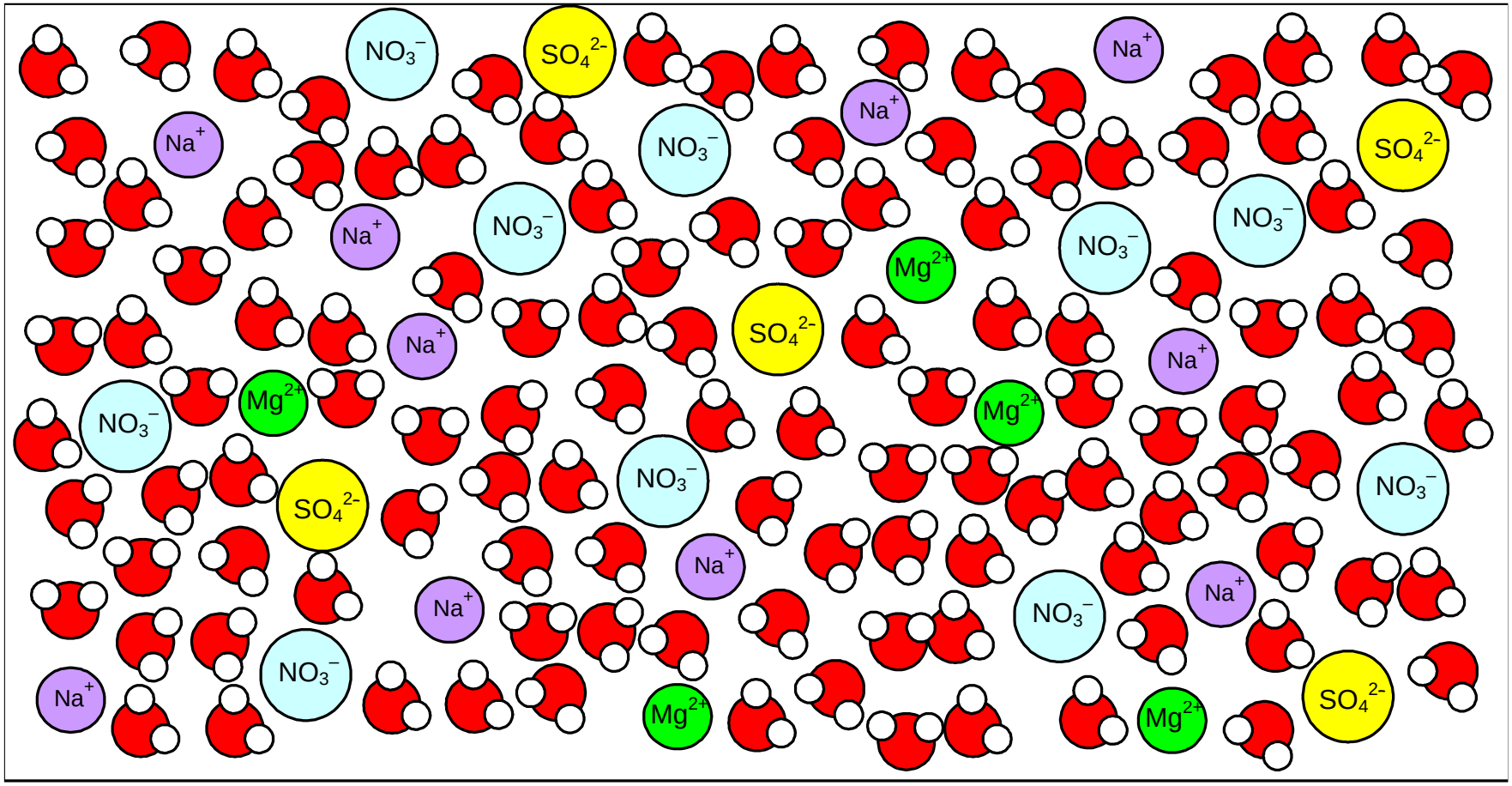
PRECIPITATION REACTION





$Mg(NO_3)_2(aq)$ $Na_2SO_4(aq)$

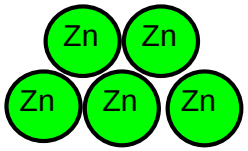
PRECIPITATION REACTION



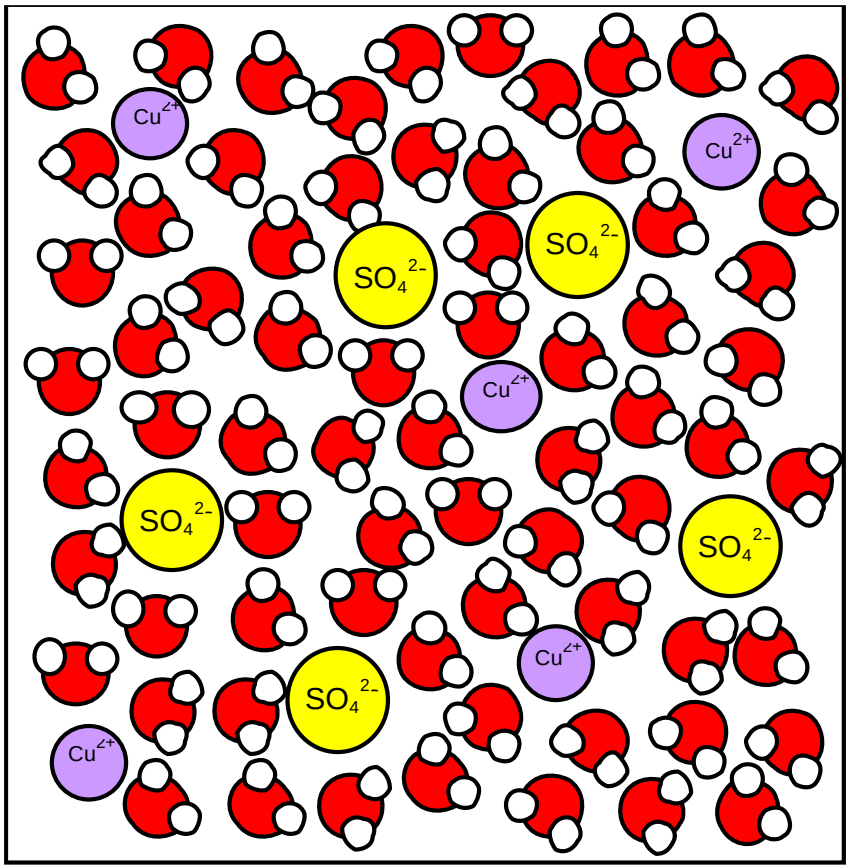
No reaction

(none of the ion combinations are insoluble)

"DISPLACEMENT" REACTION

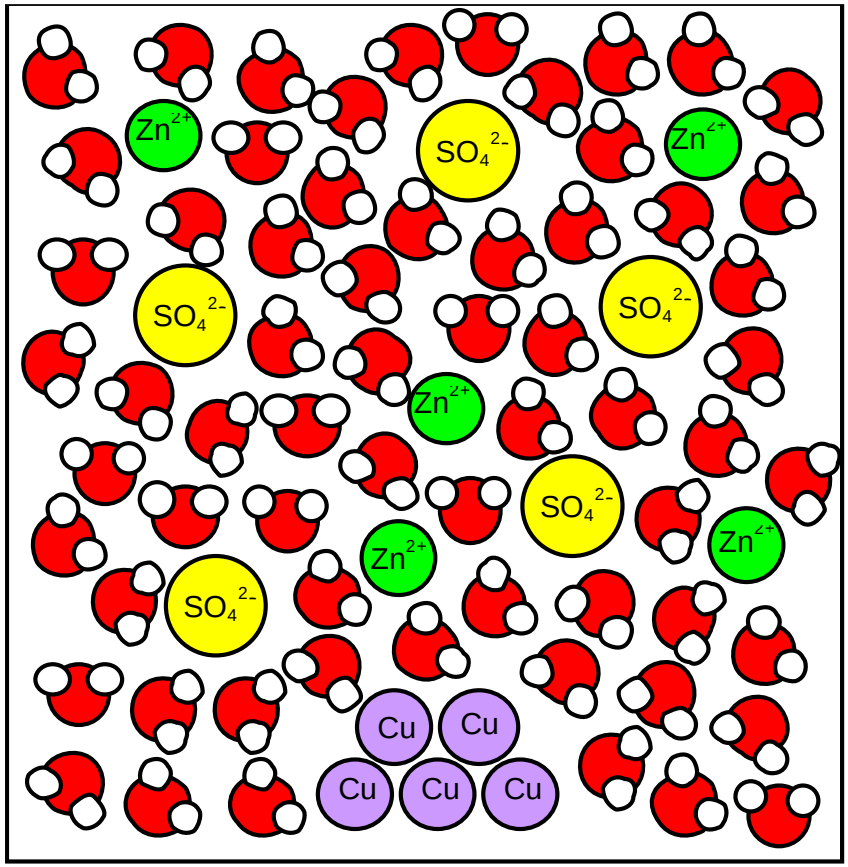


Zn(s)



$CuSO_4(aq)$

"DISPLACEMENT" REACTION



$$Zn(s) + Cu^{2+}(aq) \rightarrow Zn^{2+}(aq) + Cu(s)$$