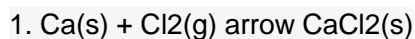


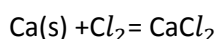
Answer on Question 76127 in General Chemistry.

Use the half-reaction method to balance equation



Solution:

1. $\text{Ca}^0 - 2\text{e} = \text{Ca}^{2+}$ the reducing agent is oxidized
 $\text{Cl}_2 + 2\text{e} = 2\text{Cl}^-$ the oxidant is reduced



2. $\text{Cu}^{2+} + 2\text{e} = \text{Cu}^0$ the oxidant is reduced
 $\text{Al}^0 - 3\text{e} = \text{Al}^{3+}$ the reducing agent is oxidized

Equalize the number of transmitted and received electrons

Put 3 before CuCl_2 and Cu

Put 2 before Al and AlCl_3

The equation is $3\text{CuCl}_2 + 2\text{Al} = 2\text{AlCl}_3 + 3\text{Cu}$

3. $\text{Cr}^{3+} + 3\text{e} = \text{Cr}^0$ the oxidant is reduced

$\text{Zn}^0 - 2\text{e} = \text{Zn}^{2+}$ the reducing agent is oxidized

Equalize the number of transmitted and received electrons

Put 2 before Cr^{3+} and Cr(s)

Put 3 before Zn and Zn^{2+}

The equation is $2\text{Cr}^{3+}(\text{aq}) + 3\text{Zn(s)} = 2\text{Cr(s)} + 3\text{Zn}^{2+}$