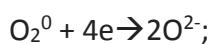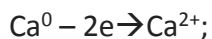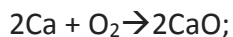## Answer on Question#49137 – Chemistry –Organic Chemistry

When calcium reacts with oxygen to form an ionic compound each metal atom loses ? electron(s) and each nonmetal atom gains ? electron(s). There must be ? calcium atom(s) for every ? oxygen atom(s) in the reaction.

Solution:

"Ca" – metal; "O" – nonmetal;

$2Ca + O_2 \rightarrow 2CaO$;

$Ca^0 – 2e \rightarrow Ca^{2+}$;

$O_2{}^0 + 4e \rightarrow 2O^{2-}$;

"Ca" -2 electrons;

"O" +2 electrons;

There must be (1) calcium atom for every (1) oxygen atom in the reaction;

(2 calcium atoms for every **1** molecule O_2);

Answer: "Ca" – loses **2** electrons;

"O" – gains **2** electrons;

There must be (**1**) calcium atom for every (**1**) oxygen atom in the reaction;

(2 calcium atoms for every molecule O_2);