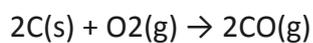


Answer on Question #43923, Chemistry, Inorganic Chemistry

Question:

For the reaction between carbon and oxygen to form carbon monoxide, beginning with 0.85 mol of C,



how many moles of O₂ are required to completely consume the C?

how many moles of CO are obtained when the C is completely reacted?

Solution:

As we can see on the reaction equation, amount of substance of Oxygen is equal to a half amount of Carbon, and amount of Carbon monoxide is equal to amount of Carbon.

$$N(\text{O}_2) \text{ (moles)} = 0.85/2 = 0.425$$

$$N(\text{CO}) \text{ (moles)} = 0.85$$

Answer: 0.425 moles of O₂ and 0.85 moles of CO