Answer on the question #63450, Chemistry / General Chemistry

Question:

Describe the reaction below.

PCl3(g) + Cl2(g) -> PCl5(g); Delta(Hf) = -87.9kJ/mol

Answer:

- In this reaction simple things make something more complex. Then, it is synthesis reaction.
- The change in enthalpy is negative → the reaction is exothermic.
- This reaction is a reaction in gas media.
- The reaction is reduction-oxidation reaction, chlorine is reduced from 0 oxydation number in Cl_2 to -1 in PCl_5, and phosphorus is oxidized from +3 in PCl_3 to +5 in PCl_5.