

Answer on Question #53763 – Chemistry – Organic Chemistry

Question:

How are the following conversions carried out?

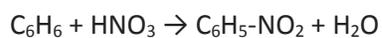
1. Ethyne to ethane
2. Benzene to nitrobenzene

Answer:

1. Alkynes are reduced to alkanes by hydrogen in presence of catalyst:



2. Benzene can be nitrated by nitric acid in presence of small amount of sulfuric acid:



[H₂SO₄ acts as catalyst which generates reactive NO₂⁺:



This particle attacks aromatic ring of benzene to produce nitrobenzene:

