

30 Arenes — Part 1 — Answers

Answers

Work through these after trying the questions yourself.

30.1 Aromatic hydrocarbons, built on a benzene ring.

30.2 By electrophilic substitution.

30.3 Adding a nitro group, using concentrated HNO_3 and H_2SO_4 .

30.4 Substitution keeps the stable ring.

30.5 Hydrogen (to give cyclohexane).

30.6 Cyclohexene has a real, localised $\text{C}=\text{C}$ double bond that readily adds bromine, removing the orange colour. Benzene's electrons are delocalised into a stable ring, which resists addition — so it does not react with bromine water and the colour stays.