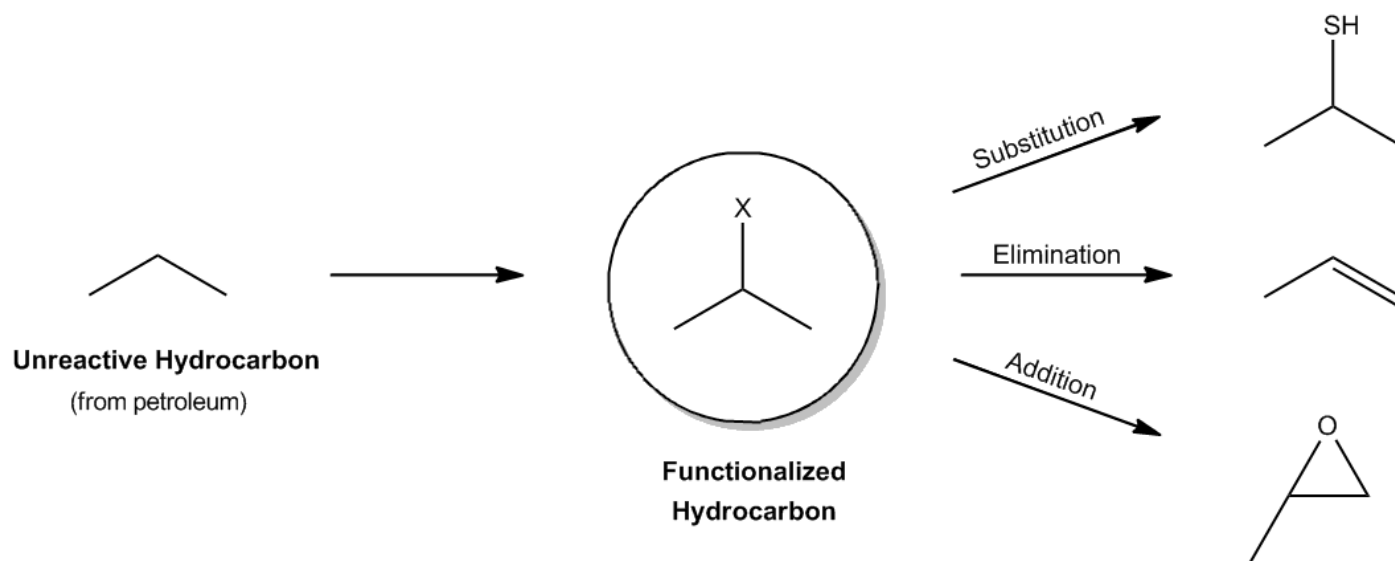


CONCEPT: FREE RADICAL HALOGENATION

□ Alkanes are the backbone of organic molecules, yet they are almost **completely unreactive**.

- The only reaction they undergo is radical halogenation, the gateway to the rest of organic synthesis.



The Radical Chain Reaction

- Alkanes will react with diatomic halogens in the presence of heat, light or any other radical initiator.

Initiation:

Propagation:

Termination:

EXAMPLE: Show the entire chain reaction mechanism for the following radical halogenation reactions, predicting which would be structure of the major alkyl halide produced.

