

Chem 343 – Organic Reactions

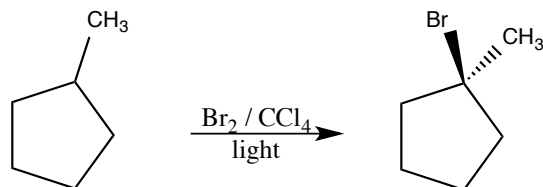
Chapter 8

Prepared by José Laboy, MS

<http://www.chem.wisc.edu/areas/clc> (Resource page)

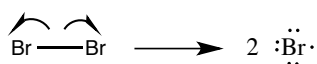
Radical Halogenation of Alkanes

Reaction

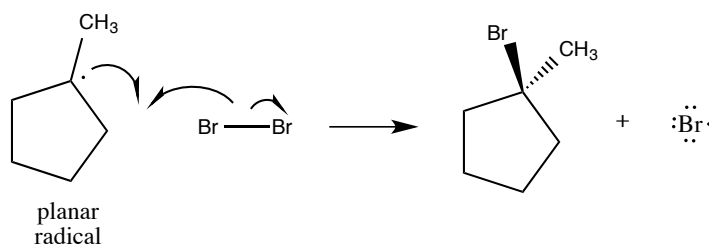
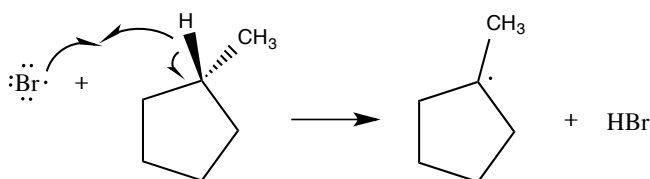


Mechanism

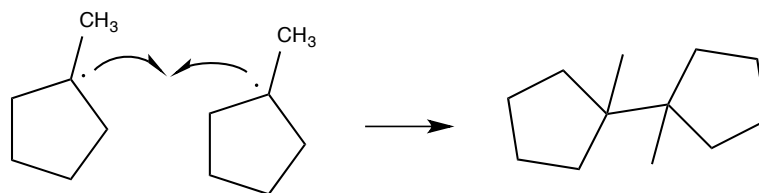
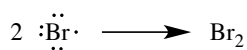
Initiation



Propagation



Termination



The reaction can be performed with Cl_2 and Br_2 . The alkyl radical formed in the propagation step is the most stable radical. Consequently the order of stability is: $3^\circ > 2^\circ > 1^\circ$.