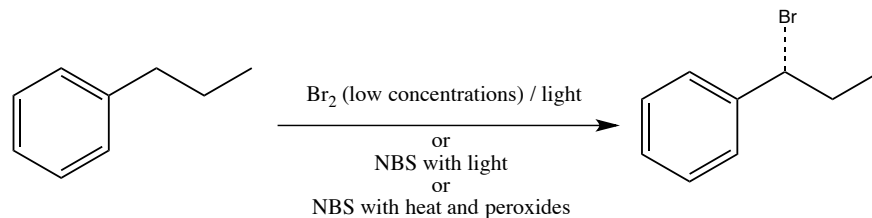


Chem 345 – Organic Reactions
Chapter 17
Prepared by José Laboy, MS
<http://www.chem.wisc.edu/areas/clc> (Resource page)

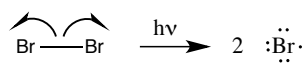
Benzylic Bromination

Reaction:

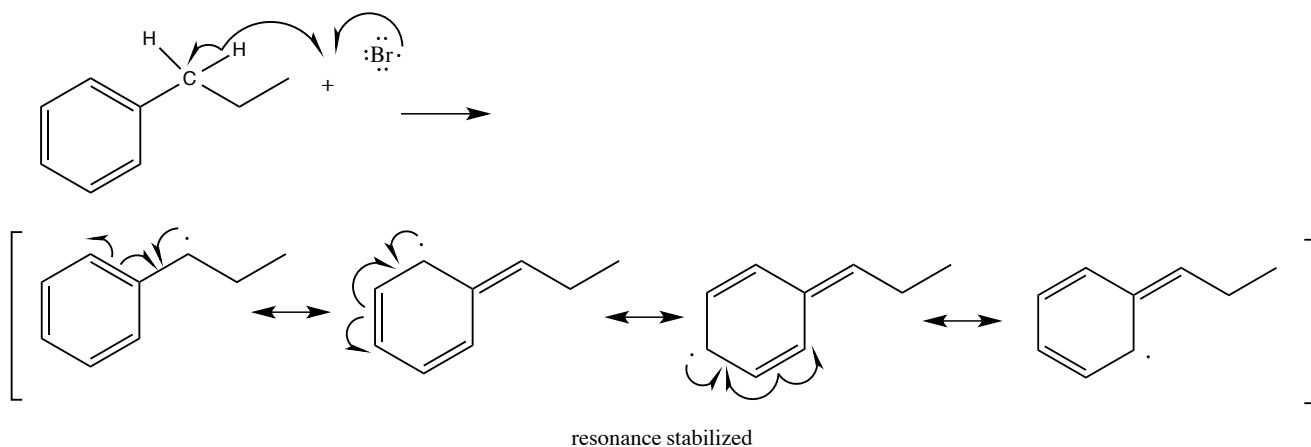


Mechanism:

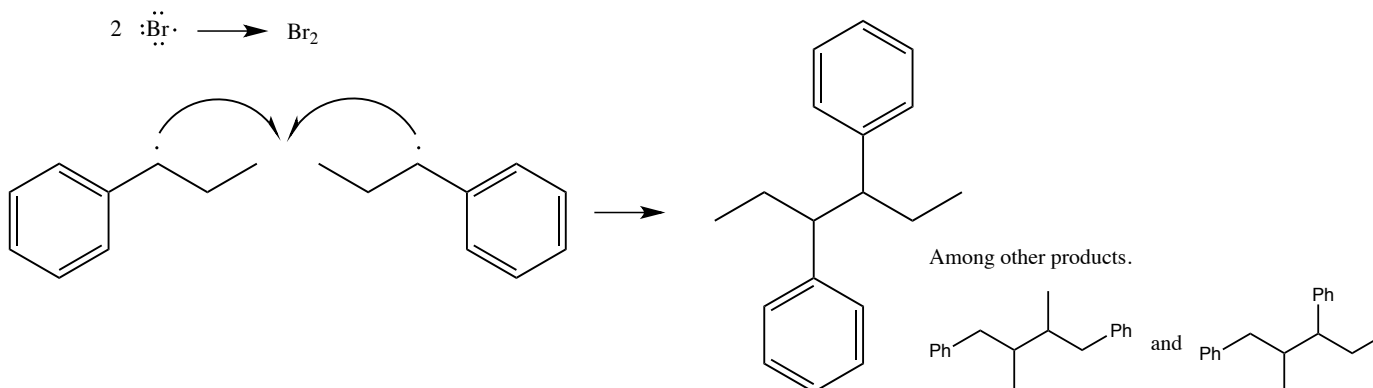
Initiation



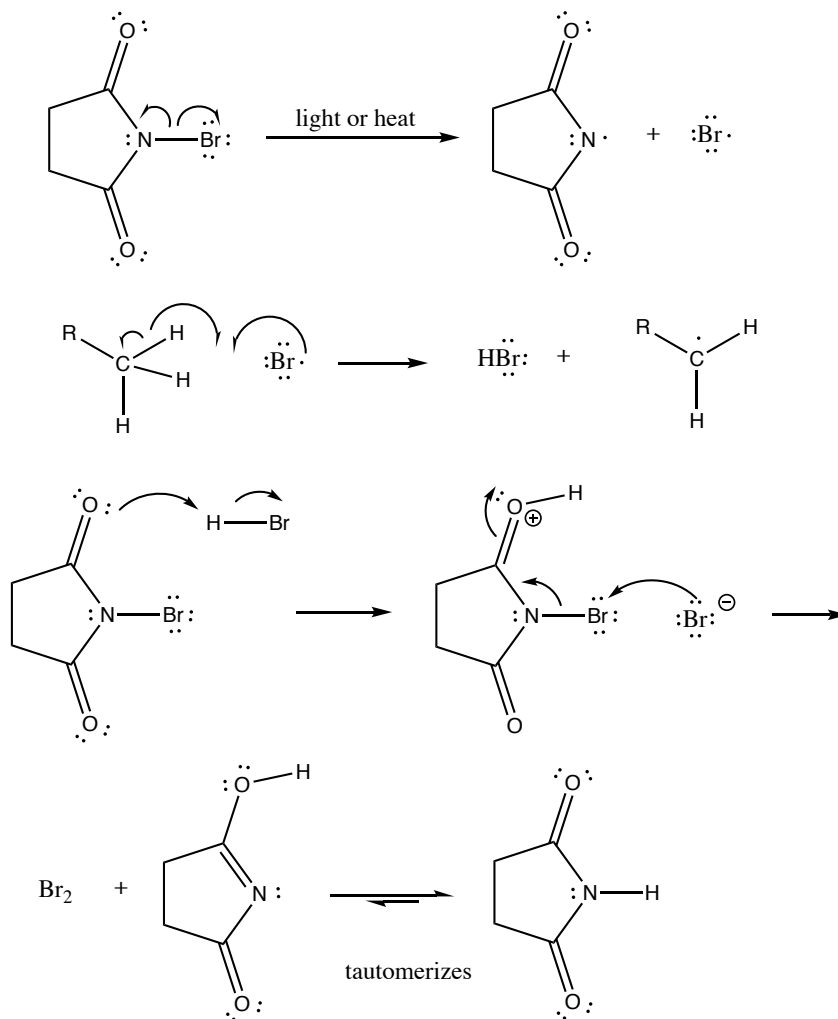
Propagation



Termination

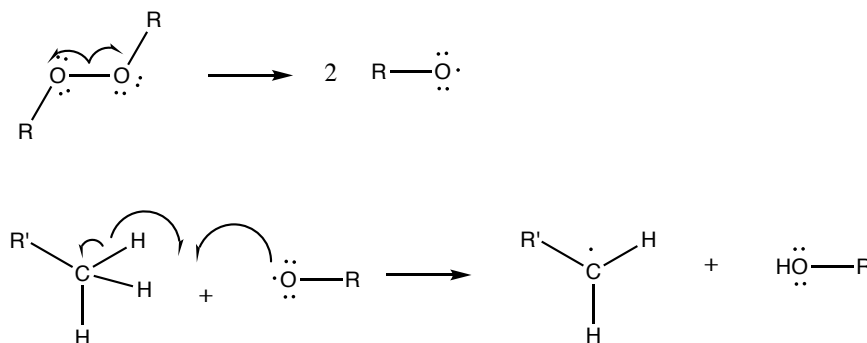


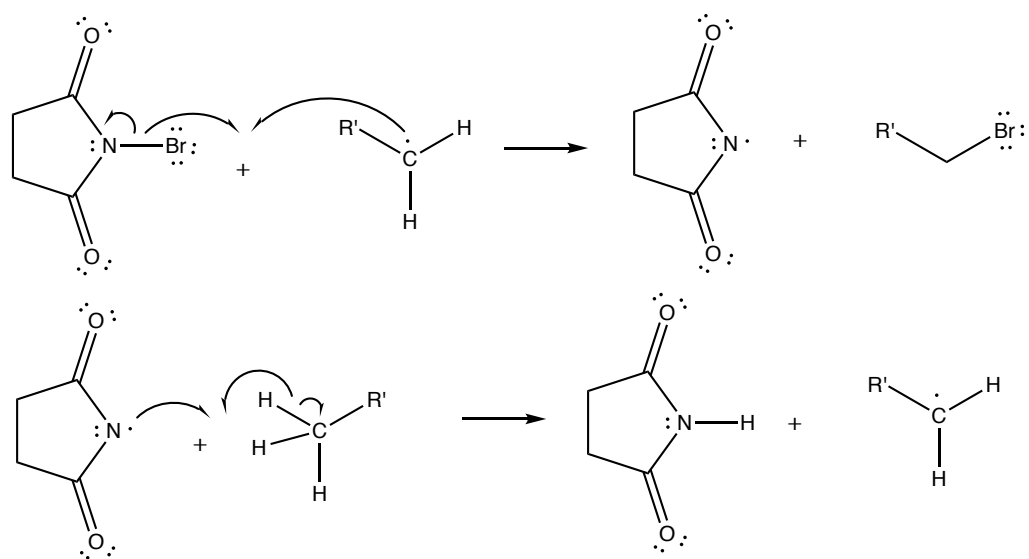
The mechanism is a radical process. It is crucial that the concentration of Br_2 is kept low. Large amounts of Br_2 favor addition to the double bond. The use of N-Bromosuccinimide (NBS) is ideal because it is insoluble in CCl_4 and only small amounts can react at a time. See mechanism below.



R = benzene

Under conditions where peroxides are used along with NBS the mechanism is slightly different.





R' = benzene