

# Chem 345 – Organic Reactions

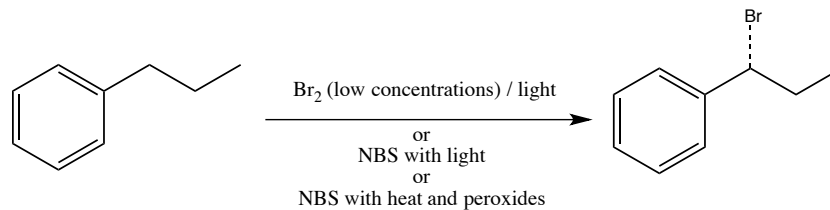
## Chapter 17

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

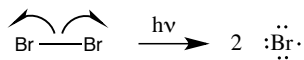
### Benzylic and Allylic Reactions #2: Benzylic Bromination

Reaction:

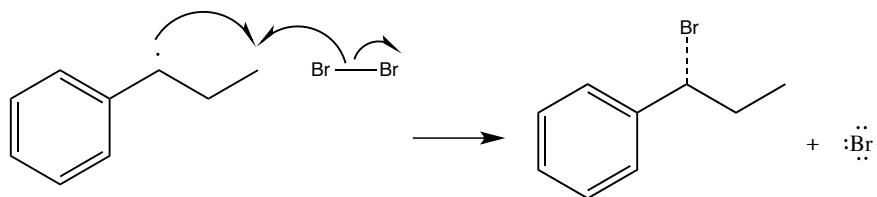
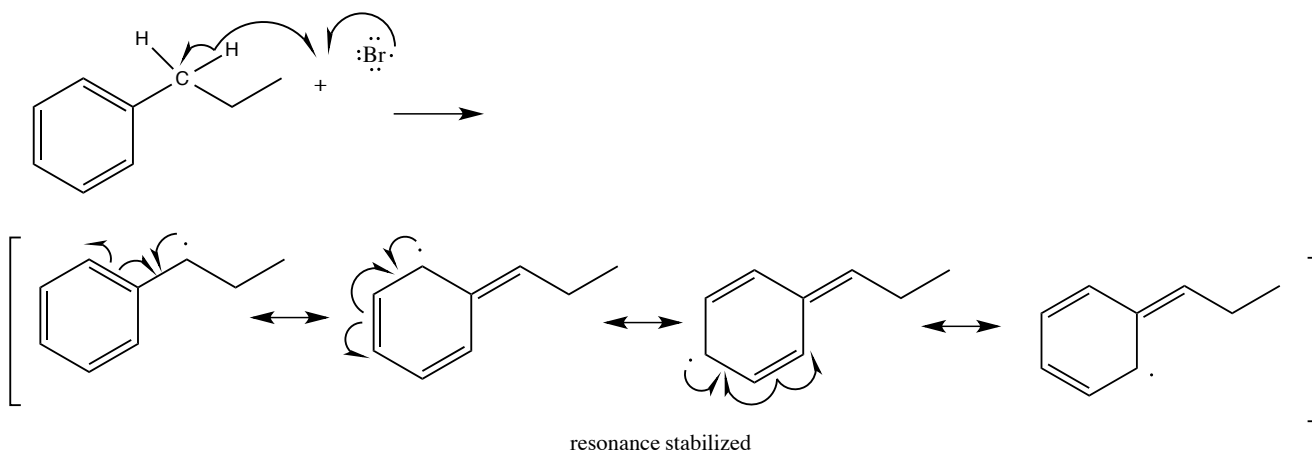


Mechanism:

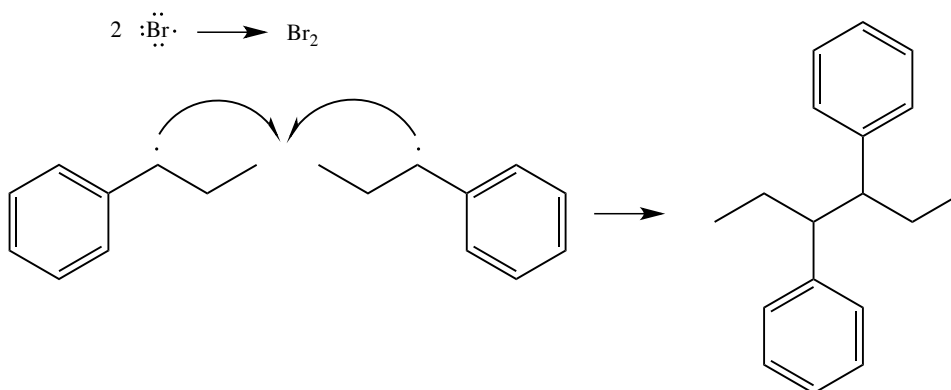
Initiation



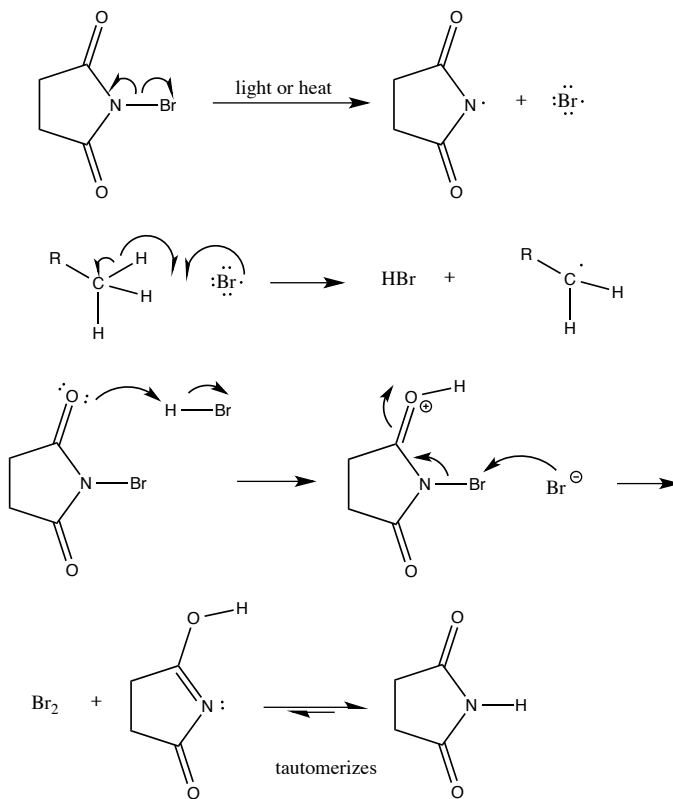
Propagation



Termination

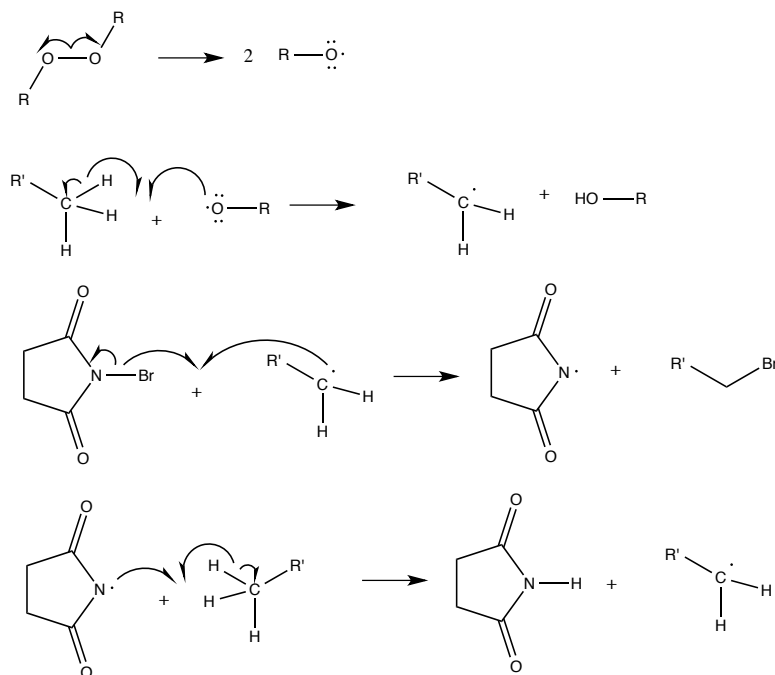


The mechanism is a radical process. It is crucial that the concentration of  $\text{Br}_2$  is kept low. Large amounts of  $\text{Br}_2$  favor addition to the double bond. The use of N-Bromosuccinimide (NBS) is ideal because it is insoluble in  $\text{CCl}_4$  and only small amounts can react at a time. See mechanism below.



R = benzene

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



R' = benzene