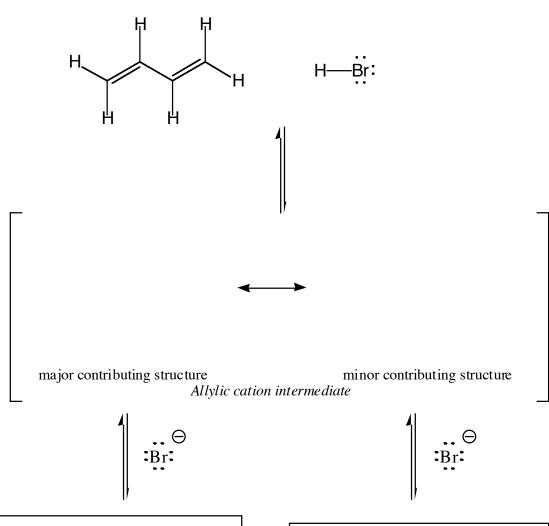
## H-X reacting with conjugated dienes

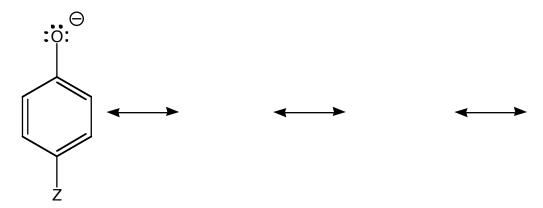


1,2 Addition

Products

1,4 Addition - more stable, more highly substituted C=C

**Products** 



Phenoxide anion

$$H \oplus H$$

Benzyl cation

$$H \longrightarrow H$$

Benzyl radical