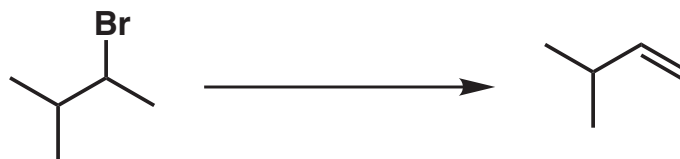


Summary

1. $C(sp^3)-X$ electrophiles can undergo β -elimination reactions as well as substitution. The β -carbon is the carbon adjacent to the electrophilic C atom. Electrons in the $C^\beta-H$ bond form a π bond with the electrophilic C atom.
2. Under basic conditions, elimination proceeds by the [E2] mechanism. Under neutral or acidic conditions, elimination proceeds by the [E1] mechanism.
3. Like the [S_N2] mechanism, the [E2] mechanism is a concerted process. A reaction is said to be concerted if bond breaking and bond making occur simultaneously.

E2 Promoting Factors

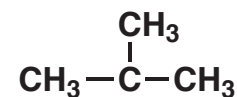
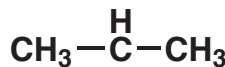


.....
check the boxes corresponding to the conditions that favor the E2 mechanism

strong base (CH_3O^-)

weak base (CH_3OH)

.....
 CH_3CH_2-X



.....
small base (HO^-)

large (bulky) base ($(CH_3)_3CO^-$)

.....
heat (Δ)

no heat