At low temperatures, only those reactions with lower activation barriers tend to predominate, even if they result in products that may not be as favorable thermodynamically. When a large, bulky base is used to perform eliminations, a less favorable product can be obtained due to the difficulty of that hindered base in removing a more sterically hindered hydrogen.

**Wittig**

\[ \text{CH}_3\text{Br} + \text{P} = \text{O}_3 \rightarrow \text{CH}_3\text{P} = \text{O}_3 \]

Triphenylphosphine (phenyl)

**Tetraalkylphosphonium salt**

\[ \text{Ph}_2\text{P} = \text{O}_3 \rightarrow \text{Ph}_2\text{P} = \text{O}_3 \text{CH}_2 \]

\[ \text{zwitterion - "twin ion"} \]

**n-Butyllithium**

\[ \text{n-"normal" - Unbranched} \]

\[ \text{Li} \]
\[
\text{oxaphosphorane} \\
\text{triphosphine oxide}
\]