

# *Preparation Reactions of Alkanes*

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## **Reduction reactions**

**Alkene hydrogenation**

**Alkyne hydrogenation**

**Alkyl halide hydride reduction**

**Alkyl halide zinc/acid reduction**

**Grignard formation/destruction**

## **Coupling reactions**

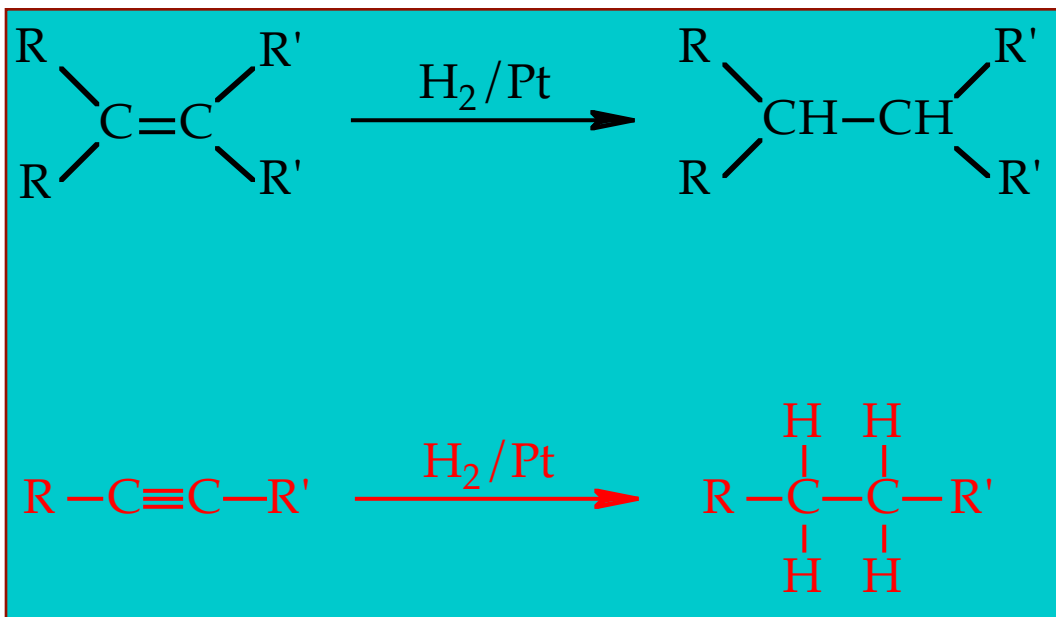
**Wurtz reaction**

**Corey-House coupling**

# Preparation of Alkanes via Reduction

**Hydrogenation of Alkenes**

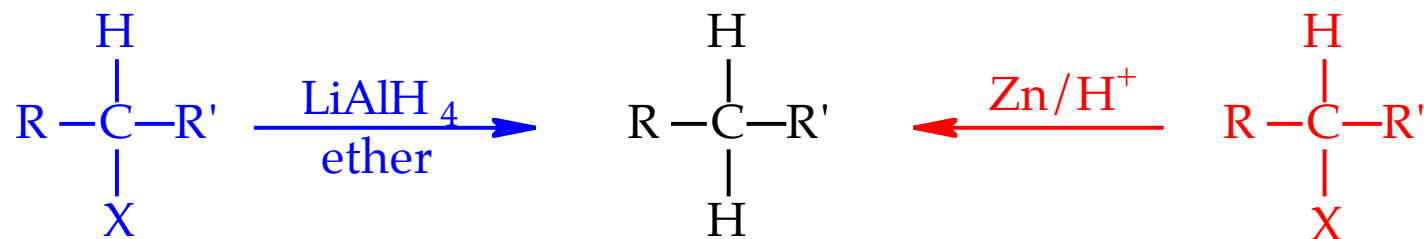
**Hydrogenation of Alkynes**



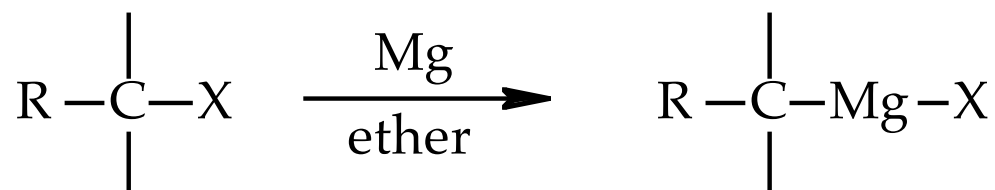
# Preparation of Alkanes via Reduction

Alkyl halide reduction via lithium aluminum hydride

Alkyl halide reduction via zinc / acid

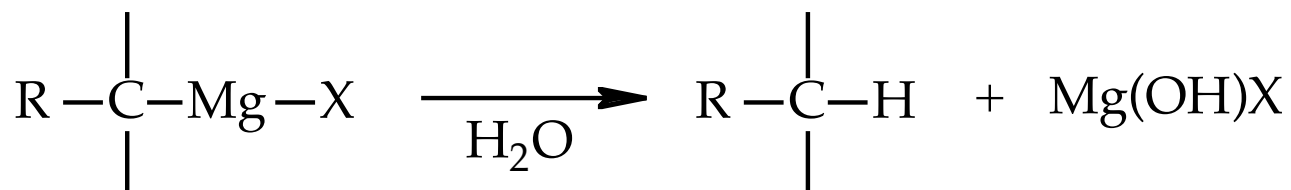


# Formation / Destruction of Grignard reagents



an alkyl halide

a Grignard reagent

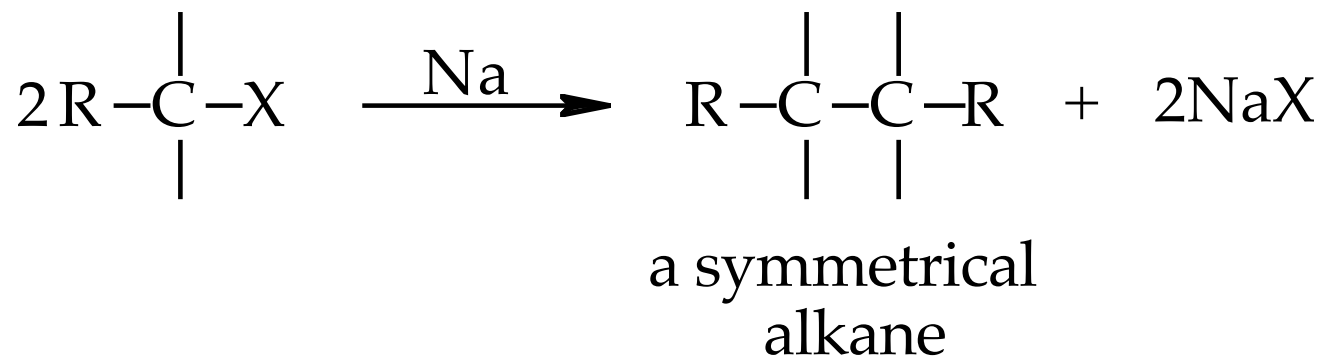


alkane

# COUPLING REACTIONS

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## Wurtz reaction

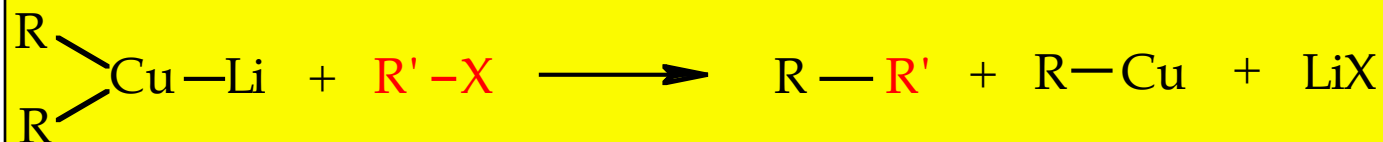


# Coupling Reactions

## Corey-House coupling (Gilman reagent)



an organocuprate  
(Gilman reagent)



# Halogenation of Alkanes

## Selectivity / Reactivity

