

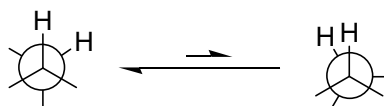
# Lecture “Modern Synthetic Methods”

## Take-home messages from Week 1

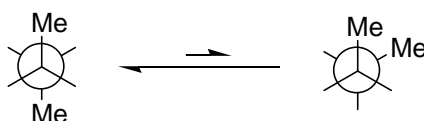
### 2.1.1. Conformational Analysis

**Alkanes:** - 3 important factors:

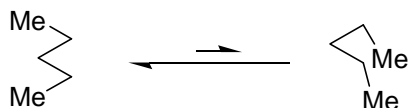
- staggered better than eclipsed (ethane)



- antiperiplanar better than gauche by 0.9 kcal (butane)

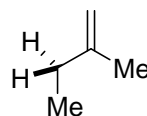


- double gauche pentane very bad (pentane)

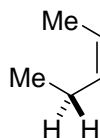


**Alkenes:** - 2 important factors:

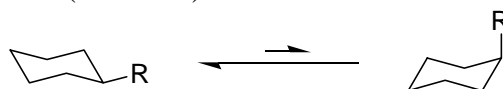
- A<sup>1,2</sup> – strain



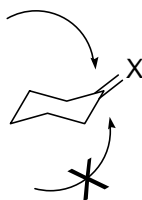
- A<sup>1,3</sup> – strain



**Cyclohexanes:** - Two chair conformers, substituents better in equatorial position (A-values)



**Cyclohexenes:** - **exocyclic** double bond: axial attack of nucleophiles preferred



- **endocyclic** double bond: Fürst-Plattner-Rule (no twist conformation)

