

Organic Chemistry: Chapter 3 - Energy Diagrams and Transition States

3.1 Energy Diagrams

Energy diagrams show the energy changes that occur during a chemical reaction. They help visualize the activation energy, transition states, and overall energy change of the reaction.

3.2 Transition State Theory

Transition state theory explains how reactions proceed through high-energy intermediate states. The transition state represents the highest energy point along the reaction coordinate and determines the reaction rate.

3.3 Exam Preparation Focus

For exam preparation, students should be able to: (1) Draw energy diagrams for simple reactions, (2) Identify transition states and intermediates, (3) Calculate activation energies from rate data, and (4) Predict how changes in conditions affect reaction rates.