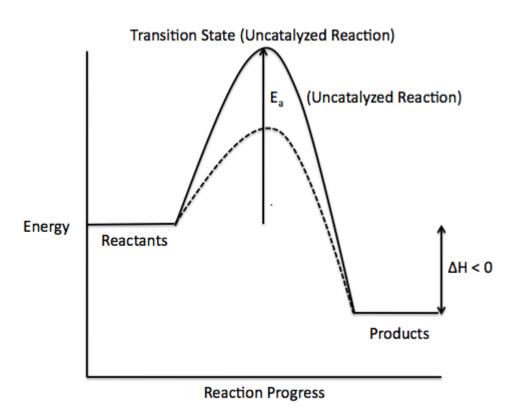
Non Sibi High School

Andover's Chem 250: Introductory/Basic Chemistry Chapter 18, Review Quiz 1 Answers

1

Sketch a completely-labeled reaction energy profile (reaction progress diagram) for an exothermic reaction. Indicate any effects a catalyst would have the sketch.



====== = effect of catalyst (lowers transition state and E_a , no change in reactants/products and ΔH)

 $\mathbf{2}$

The following mechanism has been proposed for a reaction:

Step 1:
$$NO_2 + NO_2 \longrightarrow NO_3 + NO$$

Step 2:
$$NO_3 + CO \longrightarrow NO_2 + CO_2$$

Identify the intermediate and write the overall balanced equation for the reaction.

 NO_3 is formed in the first step but then consumed in the second step, so NO_3 is the intermediate that cancels out of the overall balanced equation $NO_2 + CO \longrightarrow NO + CO_2$.



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