

Chapter 8 learning catalytics



**ASSIGN
BUSTER**

Select all of the statements that are TRUE statements according to the first and second laws of thermodynamics. Energy can be transferred or change forms, living things must increase the net entropy of their surroundings, every energy transfer increases the entropy of the universe. Select all of the TRUE statements Exergonic reactions are spontaneous, exergonic reactions have a net release of energy, endergonic reactions are not spontaneous, endergonic reactions have a net requirement for energy

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When ATP hydrolysis is used in a coupled reaction to provide energy: a phosphorylated intermediate is often produced, and the overall reaction has a net exergonic nature

Which of the following terms describes where substrates bind to an enzyme? active site

Which of the following mechanisms do enzymes use to reduce activation energy requirements and thus speed up a reaction? holding reactants close together in the right orientation for the reaction, putting a strain on existing bonds, providing a microenvironment that is more chemically suited to the reaction, and direct involvement in the reaction during transition states.

Which of the following terms describes where an inhibitor could bind to an enzyme? allosteric site and active site

Consider a situation in which an enzyme is operating at optimum temperature and pH, and has been saturated with substrate. Which of the following things could you do to significantly increase the rate of the reaction? Add more enzyme

When Zn^{+2} is introduced to a solution containing a specific enzyme that rate of the reaction catalyzed by that enzyme dramatically increases. Further studies reveal that the enzyme does not function as a catalyst at all if Zn^{+2} is absent, and that Zn^{+2} associates

with the enzyme in the active site. In this situation Zn^{+2} is acting as a cofactor