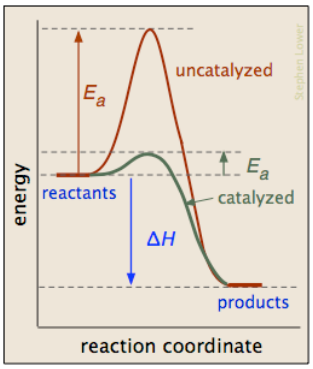
Catalysts

A *catalyst* is a substance that speeds up a reaction without being consumed by it. More specifically, a catalyst provides an alternative, lower activation energy pathway between reactants and products. As such, catalysts are vitally important to chemical technology; approximately 95% of industrial chemical processes involve catalysts of various kinds. In addition, most biochemical processes that occur in living organisms are mediated by *enzymes*, which are catalysts made of proteins.



It is important to understand that a catalyst affects only the *kinetics* of a reaction; it does *not* alter the thermodynamic tendency of the reaction to occur. Therefore, $\Delta H$is the same for the two pathways depicted in the plot above.

Contributors and Attributions

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