

## Catalysis

Catalysis describes a hastening of chemical reactions leading to a lesser amount of time needed to reach chemical equilibrium between reactants and products at given environmental conditions. For example, reduction of CO<sub>2</sub> to CH<sub>4</sub>, even if the latter is the thermodynamically stable species, can take billions of years in the absence of life (e.g., Etiope and Sherwood Lollar, 2013), but is much faster if living organisms deriving energy from this reaction use enzymes to hasten its completion.