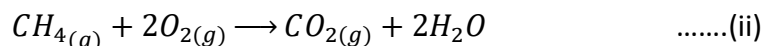


## Factors affecting rate of reaction

**(i) Nature of reactant:** The rate of a reaction is specific for reactants. Consider the following two reactions:



The first reaction is much faster than the second one at the same temperature. The difference lies in the specific nature of reactants. The reaction (i) involves breaking of only one bond in NO while the reaction (ii) involves breaking of four bonds in CH<sub>4</sub>. Thus, the rates of two reactions differ from one another.

**(ii) Concentration of the reactants:** The greater the concentrations of the reactants, the greater is the rate.

**(iii) Surface area of reactant:** Larger is Surface area, greater is rate of reaction.

**(iv) Catalyst:** There are two types of catalysts. If we add positive catalyst, the rate of the reaction increases and if we add the negative catalyst the rate of the reaction decreases.

**(v) Temperature:** Reaction rates are normally favored by increase of temperature. Also see effect of temperature on rate constant.

**(iv) Exposure to light:** Reaction rates normally becomes faster in presence of light.