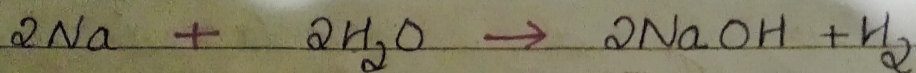


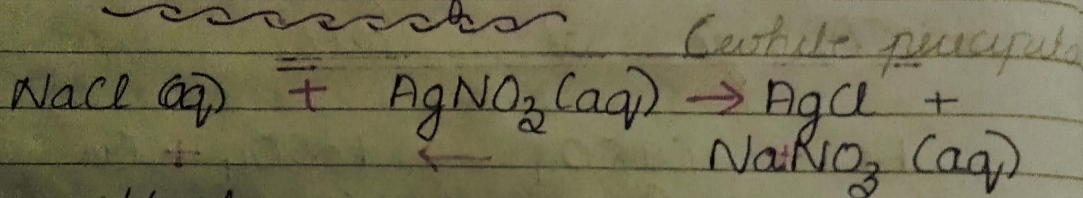
\* Decomposition of calcium carbonate :- heat energy absorbed.

Conditions necessary for chemical reaction.

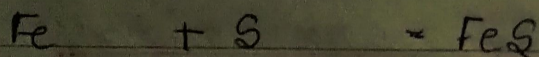
1. Close contact



2. Solution form



3. Heat energy

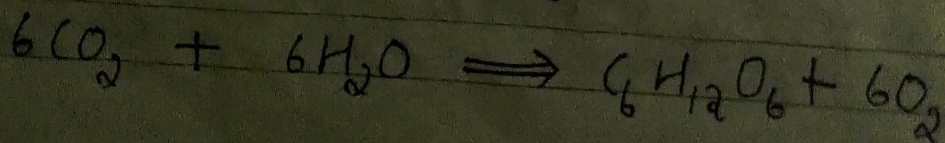


iron sulphide.

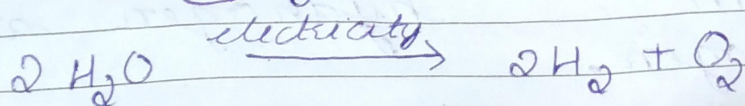
4. Light Energy

Chemical reactions which can take only in the presence of light, are called photochemical reactions.

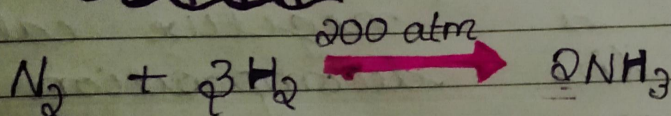
eg: Photosynthesis  
Sunlight





5. Electricity

Chemical reactions which occur only when electricity is passed through the reactant, are called electrochemical reactions.

6. Pressure7. Catalyst

A catalyst is a substance that changes the rate of a chemical reaction without itself undergoing any chemical change during the reaction.

• When a catalyst increases the rate of chemical reaction, it is known as a positive catalyst.

example. iron acts as a positive catalyst in the



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manufacture of ammonia  
from hydrogen and  
nitrogen.

eg: • When a catalyst decreases the rate of a chemical reaction, it is known as negative catalyst.

Example \* Phosphoric acid acts as a negative catalyst in the decomposition of hydrogen peroxide.

### Promoters

Substances that improve the efficiency of a catalyst are called promoters.

MOLYBDENUM acts as a promoter to increase the efficiency of catalyst iron, in the formation of ammonia.

### Enzymes

Enzymes are the complex organic compounds made up of protein units.



Enzymes act as catalyst  
for biochemical reactions.

eg: Maltase, Pepsin, Amylase