# Oxidation

Business

Oxidation is a chemical process that practically occurs all around the environment. A freshly cutApplestarts turning brown over time, metal parts of a bicycle or a car starts rusting when exposed to air and water, a copper penny turning green, all are common examples or oxidation. But oxidation is not just limited to our environment. It happens inside us as well.

The process of breaking down food and releasing energy is oxidation at a biological level. Oxidation is a phenomenon that occurs when oxygen molecules react with different substances. They can either be metals, liquids or gases. Oxidation can occur in both living and non-living substances. Technically, the process of oxidation is defined as a loss of at least one electron, when two or more substances interact with each other. Oxidation primarily depends on the amount of oxygen present and the nature of the material that it interacts with.

When fresh fruit is taken as an example, the skin provides a protective coating against oxidation. However, if the protecting skin is cracked or punctured, the chemicals in the juice of the fruit start reacting with oxygen and form other compounds. This results in dark spots and blemishes in the surface of the fruit. This concept of a protective coating is also used by various car manufacturers in the form of a polyurethane coating that is applied before the body of the car is sent for painting. This coating prevents the metal from coming in contact with the oxygen in the atmosphere.

However, oxidation is not always a destructive process. The gears of the world practically turn due to oxidation. The fuel is our cars, the production of electricity, the gas in our stoves, all burn and release energy when different

elements combines with oxygen. But oxidation does not only occur in our environment. It occurs within us as well.

Our cells combine the glucose with energy to release energy that keeps the human body running. It can be said that if the cell is unable to carry out this oxidation, it dies, which eventually results in the death of the organism as well.