

ELECTROCHEMICAL REACTIONS

LEARNING OUTCOMES

- Able to define electrochemical reaction.
- Understand application of electrochemical reactions.
- Able to define electroplating.
- Comprehend different uses of electroplating.

An electrochemical reaction is the chemical reaction in which electrical energy is consumed or produced.

Electroplating

Electroplating is an electrochemical reaction. Electricity is used to obtain a thin coating of a particular metal on other metallic objects. This process is known as electroplating. Silver rod is connected to the anode (+ve charged electrode) of the circuit and a iron ring is kept at the cathode (-ve charged electrode). Both are kept immersed in a solution. Then, a current is supplied to the anode that oxidizes the silver atoms and dissolves them into the solution. The dissolved ions of silver are reduced at the cathode and plated on the jewelry. Hence, the iron ring gets covered with a thin layer of silver metal.

Use of electroplating

- Gold covered ornaments.
- To prevent corrosion.

Endoergic and exoergic reactions

Forms of energy like heat, light, and electricity are exchanged during chemical reactions. Those chemical reactions which absorb energy is called endoergic reactions. Those chemical reactions which involve liberation of energy is called exoergic reactions.

