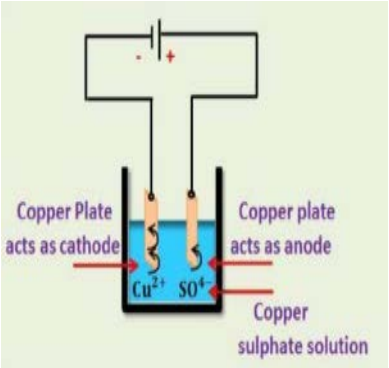
Electroplating

The process of depositing a thin layer of any desired metal on another material with the help of an electric current is called electroplating.

Example: When the electric current passes through the copper sulphate solution, copper sulphate dissociates into copper and sulphate. The free copper gets drawn to the electrode connected to the negative terminal of the battery and gets deposited on it.

From the other electrode (a copper plate) an equal amount of copper gets dissolved in the solution. Thus, the loss of copper from the solution is restored and the process keeps going.



This means that copper gets transferred from one electrode to the other by passing the electric current. Electroplating is also a chemical effect of electric current.

Applications of electroplating:

1) Chromium has a shiny appearance. It does not corrode and help to resist scratches. Because of this chromium is electroplated on many metallic objects like wheel rims, bath taps, kitchen gas burners and many others.

2) Tin cans used for storing food are made by electroplating tin on iron. Because the tin is less reactive as compared to the iron. Therefore, food does not spoil as it does not come in contact with iron.

3) In bridges and automobile, iron is used to provide strength. Iron is subject to corrode or rust. Therefore, zinc is deposited over iron to protect it from corrosion and the formation of rust. This is because Zinc is more reactive than iron.

4) The artificial ornaments are less expensive metals that electroplate with metals like silver or gold. These ornaments have the appearance of silver or gold but they are much less expensive than silver or gold ornaments.