



#### ACROSS

- 1 \_\_\_\_\_ force or potential of a body is the work done in joules to bring a unit electric charge from infinity to the body.
- 3 A \_\_\_\_\_ cell is a structure that contains a conductive electrode and a surrounding conductive electrolyte separated by a naturally-occurring Helmholtz double layer.
- 4 \_\_\_\_\_ is the process of using electrical current to coat an electrically conductive object with a relatively thin layer of metal.
- 7 The standard electrode \_\_\_\_\_ is the measure of individual voltage of any electrode at standard ambient conditions, which is at a temperature of 298K, solutes at a concentration of 1 M, and gases at a pressure of 1 bar.
- 9 A \_\_\_\_\_ cell (or voltaic cell) consists of two different metals connected by a salt bridge or a porous disk between the individual half-cells.
- 13 The standard \_\_\_\_\_ electrode is a redox electrode which forms the basis of the thermodynamic scale of oxidation-reduction potentials.
- 15 A \_\_\_\_\_ is an electrical conductor used to make contact with a nonmetallic part of a circuit.
- 16 \_\_\_\_\_ is a method of separating chemically bonded elements and compounds by passing an electric current through them.

#### DOWN

- 1 \_\_\_\_\_ is a branch of chemistry that studies the reactions which take place at the interface of an electronic conductor and an ionic conductor.
- 2 A \_\_\_\_\_ is a substance containing free ions that behaves as an electrically conductive medium.
- 5 The \_\_\_\_\_ constant is the amount of electric charge in one mole of electrons.
- 6 A \_\_\_\_\_ is an electrode through which the positive direction of electric current flows out of a polarized electrical device.
- 8 \_\_\_\_\_ cells are composed of a vessel used to perform electrolysis and a cathode and anode.
- 10 A \_\_\_\_\_ is an electrode through which the positive direction of electric current flows into a polarized electrical device.
- 11 The \_\_\_\_\_ equation gives the electrode potential relative to the standard electrode potential of the electrode couple as a function of component concentrations.
- 12 A \_\_\_\_\_ bridge is a laboratory device used to connect the oxidation and reduction half-cells of a galvanic cell.
- 14 An electrochemical \_\_\_\_\_ is a device used for creating an electromotive force and current from chemical reactions.