Diode structure

Diodes are made of materials called semi-conductors. These materials, examples of which are silicon and germanium, are neither good conductors nor insulators. Their limited conduction is because they contain some free electrons.

Impurities are added to the semi-conducting material to control how well it conducts electricity. The natural conduction of the semi-conductor material is called intrinsic conduction and the extra conduction due to the added impurities is called extrinsic conduction.