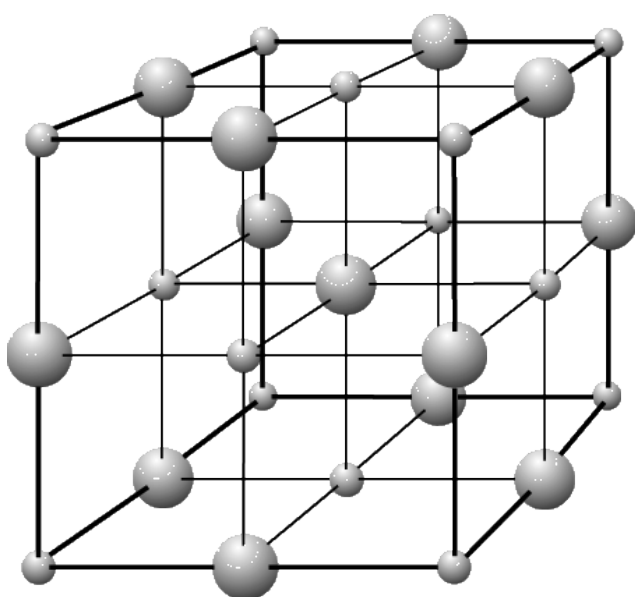


Question #46199, Chemistry, Inorganic Chemistry

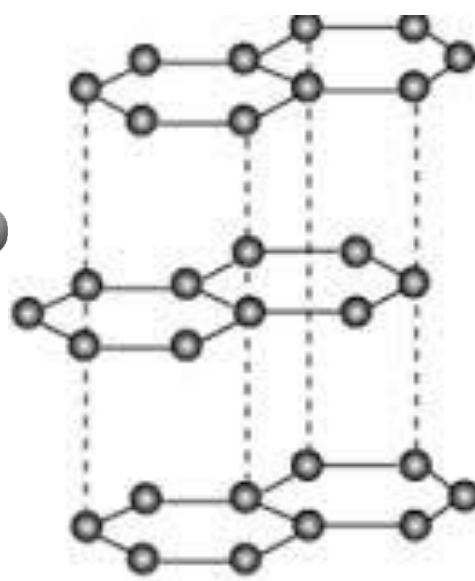
Why diamond non conductor & graphite electricity conductor? Explain.

Answer:

Diamond and graphite are allotropic forms of carbon. Electrical conductivity in these modifications determined by the structure of the crystal lattice. Tetravalent carbon in diamond form 4 bonds with other atoms of carbon standing next to him. Therefore, all of the electrons that are in the outer energy level are occupied. Graphite forms a layered structure in which each carbon atom forms three bonds with the neighboring carbon atoms. Thus the carbon atom remains one of the unpaired electrons in the outer energy level, due to which the graphite conducts electricity.



Diamond



Graphite