

Fullerene -> It is an allotrope of carbon and also known as Buckminster fullerene or bucky ball. -> It is found in C50, C60, C70 different forms but C60 is its most stable and used allotrope.

Structure of fullerene -> Made up of 60 carbons. -> Each carbon is sp^2 hybridized. -> In its structure 12 pentagons and 20 hexagons. -> Each pentagon is surrounded by 5 hexagons and hence no two hexagons touch each other.

Preparation of fullerene -> -> Fullerene is formed by the Arc Discharge Method. -> Graphite rods are vaporized in the atmosphere of inert gas (Helium). -> Graphite rod is vaporized to form fullerene.

Properties of fullerene -> -> It is a mustard color (black-brown) and spherical like football in structure. -> These are semiconductor in nature but after doping can be converted into conductor. -> These are thermally stable. -> It is possible to trap some ions inside fullerene.

Applications of fullerene -> -> Powerful anti-oxidant agent used in health and personal care. -> It is used as drug delivery agent into the body. -> Used as lubricant. -> Used to create superconductors. -> used in the water purification.