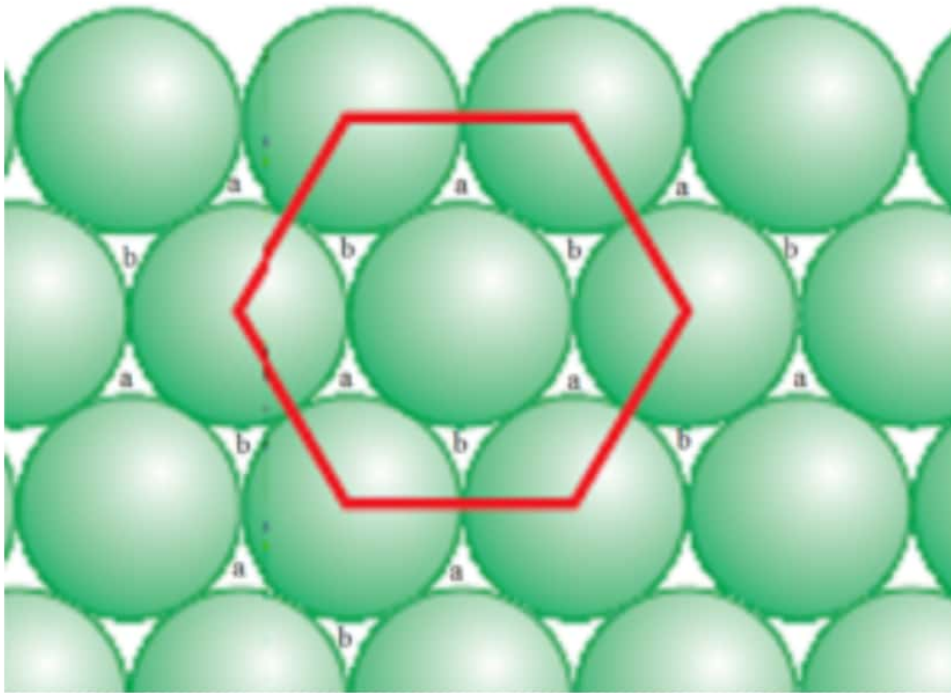
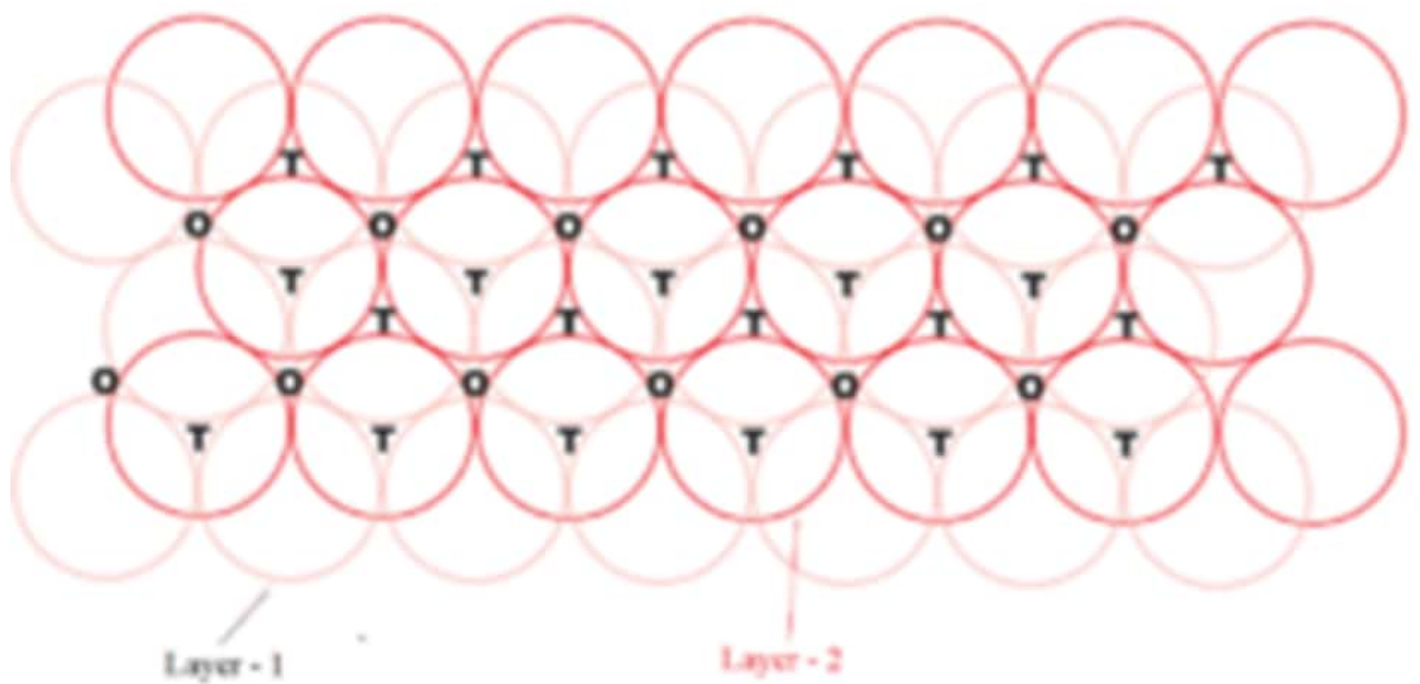


Let us consider a closed pack hexagonal packing in the first layer as shown. There are empty spaces between the particles (spheres) are called voids.



All the voids are equivalent in the first layer they have marked alternately as 'a' and 'b'. The spheres of the second layer can be either placed on voids which are marked 'a' or 'b' but it is impossible to place spheres on both types of voids simultaneously. When spheres of the new layer are placed on voids marked 'a' then voids marked as 'b' remain unoccupied.

Thus there is no void above 'a' in the second layer but there is void above 'b' even in the second layer. The void between the first layer and second layer at 'a' is tetrahedral void, while the void between the first layer and the second layer at 'b' is octahedral void.



T = Tetrahedral void and O = Octahedral void