

Exercise VI

1) What is the geometry of the central atom in: $(\text{CO}_3)^{2-}$, $(\text{SiH}_3)^-$, CS_2 , $(\text{CMe}_3)^+$?

2) Name an acid-base reaction which produces CO_2 , and name a redox reaction which produces CO_2 ?

3) What is not referring to a carbon allotrope?

Graphene
Graphale
Graphite
Graphyne
Fullerane
Fullerene
Buckyball
Diamond

4) How can you synthesize carbon monoxide in the laboratory (equation)?

5) In the structure of K_xC_{60} , all interstitial sites (octahedral and tetrahedral) are occupied by potassium ions. Given that the C_{60} anions crystallize with an fcc arrangement, what is the value of x in K_xC_{60} ?