Notes 02/27

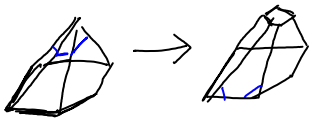
Wednesday, February 27, 2008
9:56 AM

Check handouts on VOH
- List of structures to know
- Closed packing

Only 2 types of closest packing
- Hexagonal closest packing (ABAB)
- Cubic closest packing (ABC)

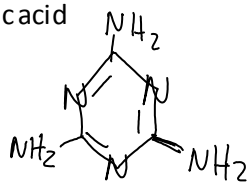
Other types of Packing (not closest)
- Cubic packing
- Body center cubic packing

- Four forms of carbon
  - Graphite
    - Shows electrical conductivity
    - C + Li or K -> Li^+ or $K^+ + C^-$
      - 1 K for each 8 carbons ($K^+C_8^-$)
      - $C_{24}K$, $C_{36}K$, $C_{48}K$, $C_{60}K$
        - K or Li intercalatatoin - diffusion of K^+ or Li^+ between layers of graphite.
  - Diamond (draw.. Will be on exam)
    - Tetrahedral carbons (extended structure based on cubic closest packing of C)
  - Fullerenes (will not have to draw on exam)
    - C_{60}
    - Icosahedron - chop of corners of icosahedron… leaves behind pentagons.



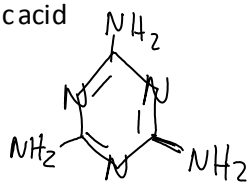
  - Ferrocene

  - When C is connected to electronegative atoms than it can do hydrogen bonding
    - Cyanuric acid

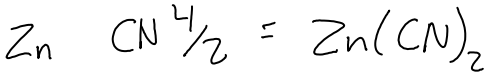


  - $Zn(CN)_2$ (based on diamond)

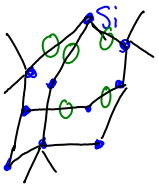
- Cyanuric acid



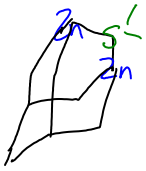
- $Zn(CN)_2$ (based on diamond)



- SiO_2

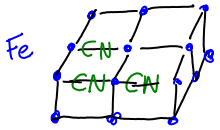


- ZnS



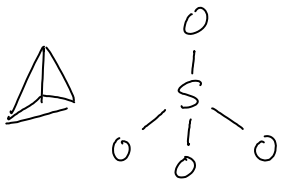
Alternating Zn and S

- $FeFe(CN)_6$



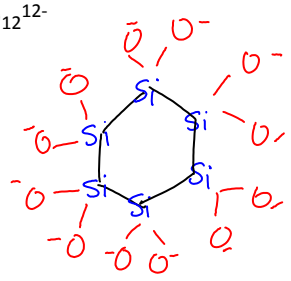
- $KFeFe(CN)_6$
  - Mixed iron (III) and iron (II)

- Silicon
  - Much of silicon is silicon oxides (rock)



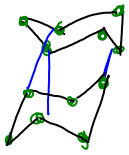
Know other structures on VOH

- $Si_6O_{12}^{12-}$



- SiO_2

Hexagonal packing



Cubic packing (see VOH)