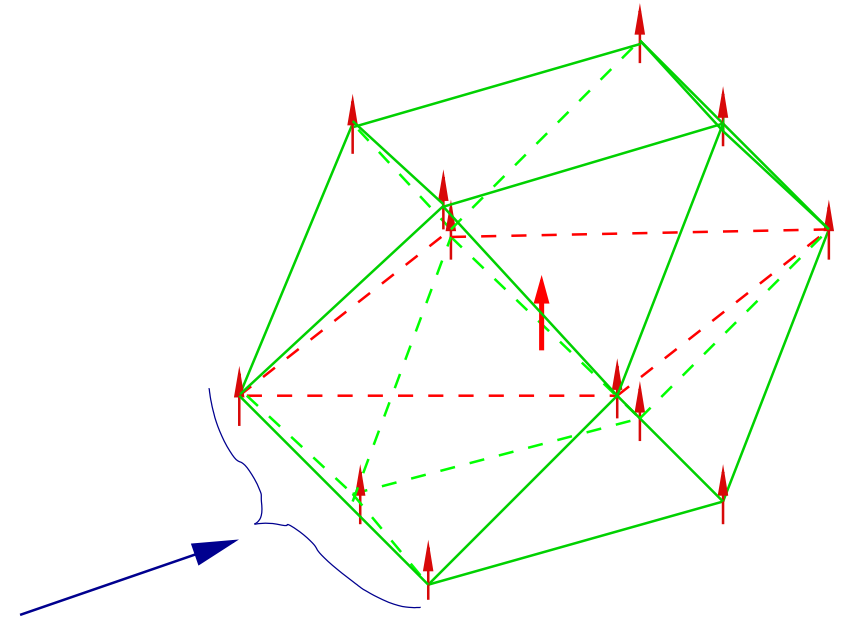
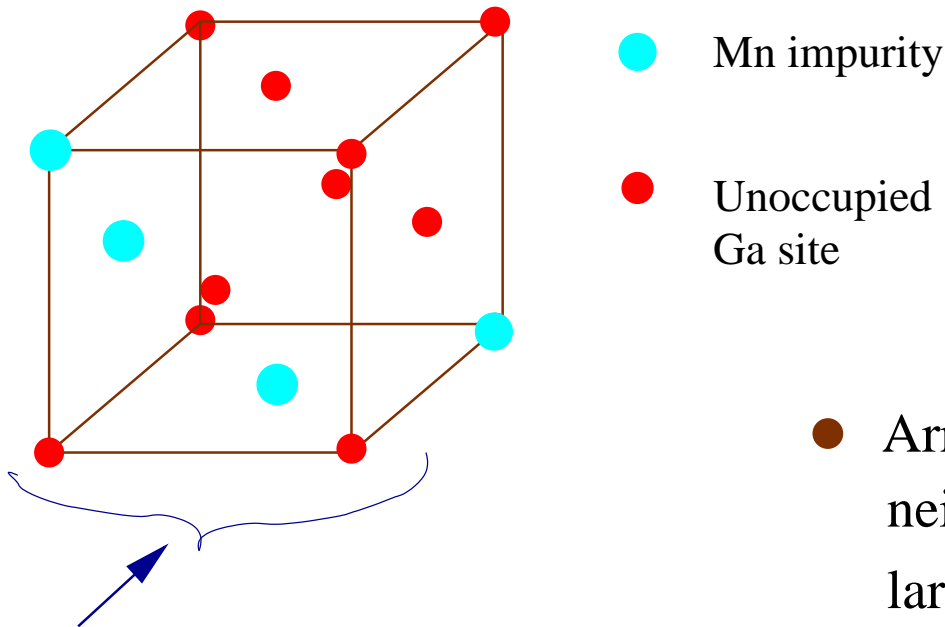


# Impurity coordination geometry and our thermal mean field theory

GaAs zinc-blende lattice  
(As atoms not shown)



- Disorder is strong; we carefully keep track of **Mn** ion positional randomness

- Arrangement of 12 nearest neighbors about the **Mn** impurity; large coordination number justifies **thermal mean field theory**
- In **thermal MFT**, we replace individual spins  $\uparrow_i$  with the thermally and site averaged polarization  $\langle \uparrow \rangle$
- We **retain** positional disorder in our model