

## a) VMD visualization of crystal structures

- 1) creation of a crystal using the script lattice (./lattice 3 > crystal.xyz)
- 2) visualization with VMD (vmd crystal.xyz)
  - . CPK drawing method (Graphics-> Representation-> Drawing Method CPK)
  - . changing visualization options (radius,colors..)

## b) VMD visualization of trajectories

- 1) MD trajectory of 3000 steps (T=1,gamma=1)
- 2) visualization with VMD of the trajectory
- 3) what changes using "wrapatoms True" in the input file
- 4) multiple frames visualization (Graphics-> Representation-> Trajectory -> Selected Atoms "index 1" -> draw multiple frames "0:30:300" )

## c) BLOCK ANALYSIS of MD traj

- 1) calculation of average and standard deviation of total energy of previous MD traj
- 2) discard the first part of trajectory (relaxation of the system)
- 3) blocks analysis on this trajectory (does this trajectory reached equilibrium?)
- 4) repeat blocks analysis with longer trajectories ( nstep=5000,10000,20000 )
- 5) calculate correlation time