Homework

1. Give the electron configurations for the following ions: P^{5+}, $P^{3-,}$ and Ni^{2+}.

2. What type(s) of bonding would be expected for each of the following materials: solid xenon, bronze, and rubber?

3. Calculate the force of attraction between a Ca^{2+} and an O^{2-} ion the centers of which are separated by a distance of 1.25 nm.

4. Below are listed the atomic weight, density, and atomic radius for three hypothetical alloys. For each determine whether its crystal structure is FCC, BCC, or simple cubic and then justify your determination.

Alloy	Atomic Weight (g/mol)	Density (g/cm^3)	Atomic Radius (nm)
A	43.1	6.40	0.122
B	184.4	12.30	0.146
C	91.6	9.60	0.137