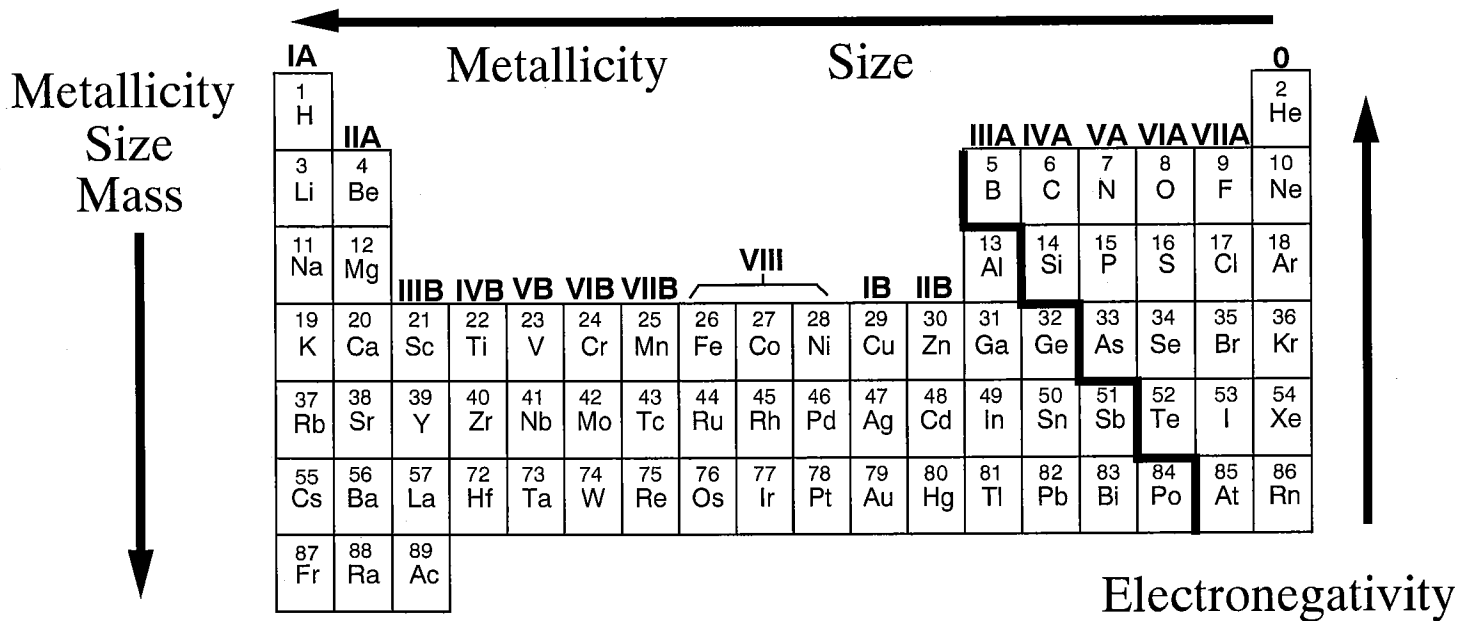


IA											nonmetals						0
1 H 2.1																2 He	
IIA												IIIA	IVA	VA	VI	VIIA	VIIIA
3 Li 1.0	4 Be 1.5	Metals										5 B 2.0	6 C 2.5	7 N 3.0	8 O 3.5	9 F 4.0	10 Ne
11 Na 0.9	12 Mg 1.2	IIIB	IVB	VB	VIB	VIIB	VIII			IB	IIB	13 Al 1.5	14 Si 1.8	15 P 2.1	16 S 2.5	17 Cl 3.0	18 Ar
19 K 0.8	20 Ca 1.0	21 Sc 1.3	22 Ti 1.5	23 V 1.6	24 Cr 1.6	25 Mn 1.5	26 Fe 1.8	27 Co 1.8	28 Ni 1.8	29 Cu 1.9	30 Zn 1.6	31 Ga 1.6	32 Ge 1.8	33 As 2.0	34 Se 2.4	35 Br 2.8	36 Kr
37 Rb 0.8	38 Sr 1.0	39 Y 1.2	40 Zr 1.4	41 Nb 1.6	42 Mo 1.8	43 Tc 1.9	44 Ru 2.2	45 Rh 2.2	46 Pd 2.2	47 Ag 1.9	48 Cd 1.7	49 In 1.7	50 Sn 1.8	51 Sb 1.9	52 Te 2.1	53 I 2.5	54 Xe
55 Cs 0.7	56 Ba 0.9	57 La 1.1	72 Hf 1.3	73 Ta 1.5	74 W 1.7	75 Re 1.9	76 Os 2.2	77 Ir 2.2	78 Pt 2.2	79 Au 2.4	80 Hg 1.9	81 Tl 1.8	82 Pb 1.8	83 Bi 1.9	84 Po 2.0	85 At 2.2	86 Rn
87 Fr 0.7	88 Ra 0.9	89 Ac 1.1															

Lanthanides

58 Ce 1.2	59 Pr 1.2	60 Nd 1.2	61 Pm 1.2	62 Sm 1.2	63 Eu 1.2	64 Gd 1.2	65 Tb 1.2	66 Dy 1.2	67 Ho 1.2	68 Er 1.2	69 Tm 1.2	70 Yb 1.2	71 Lu 1.2
90 Th 1.3	91 Pa 1.5	92 U 1.7	92 Np 1.3	94 Pu 1.3	95 Am 1.3	96 Cm 1.3	97 Bk 1.3	98 Cf 1.3	99 Es 1.3	100 Fm 1.3	101 Md 1.3	102 No 1.3	103 Lr 1.3

Actinides



58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
90 Th	91 Pa	92 U	92 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr

Electronegativity (increases from left to right, indicated by a right-pointing arrow below the table)

Mass (increases from left to right, indicated by a right-pointing arrow below the table)

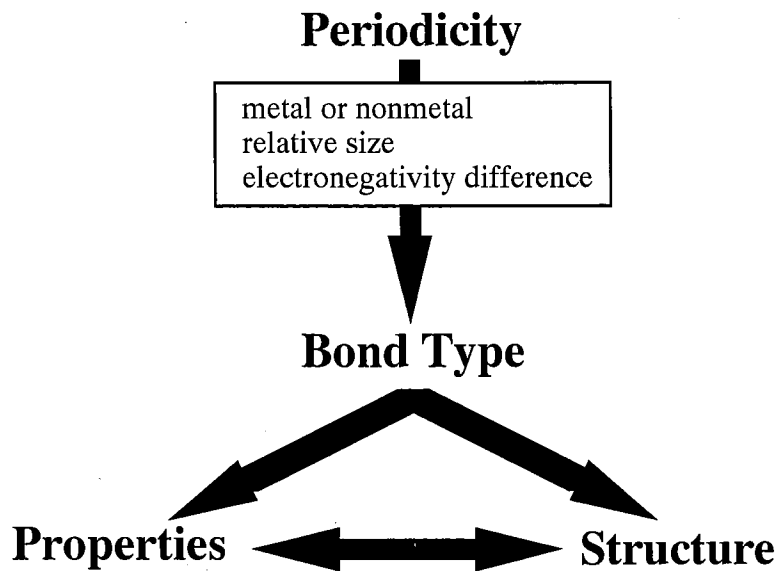
Periodicity

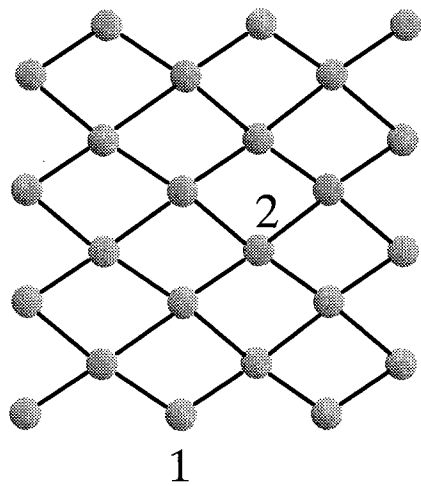
metal or nonmetal
relative size
electronegativity difference

Bond Type

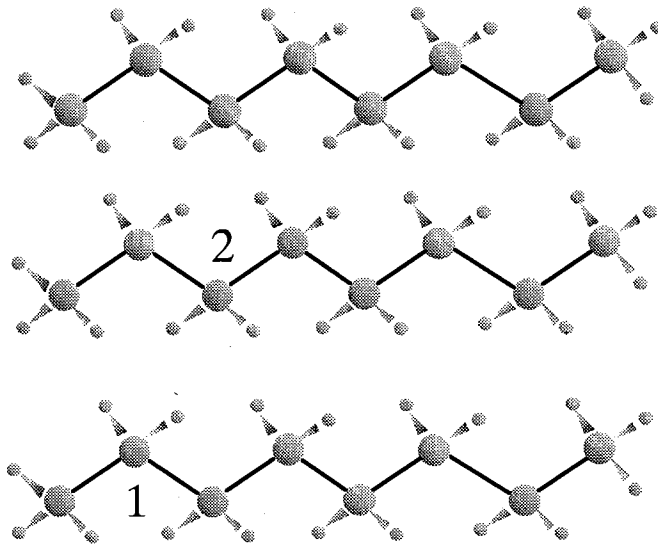
Properties

Structure

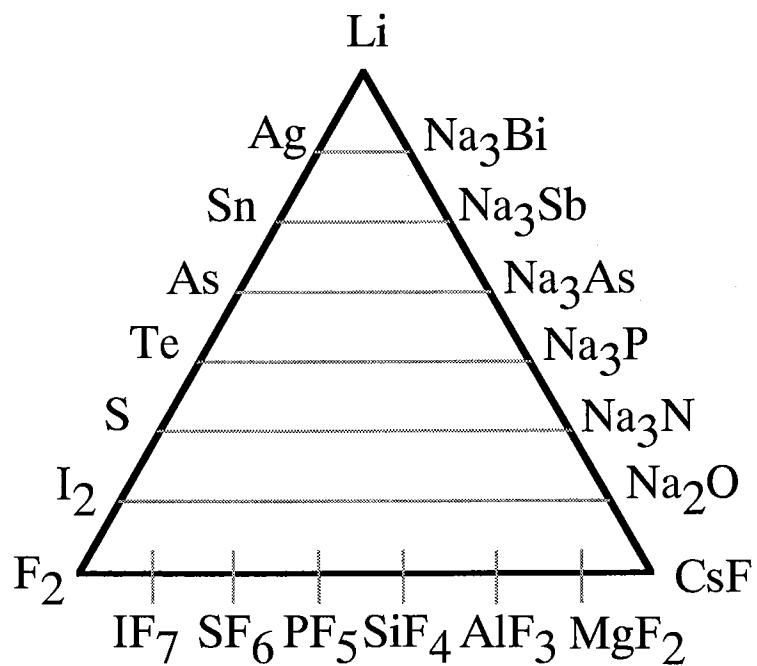




(a)



(b)



1.5

IA IIA

Metallc Elements

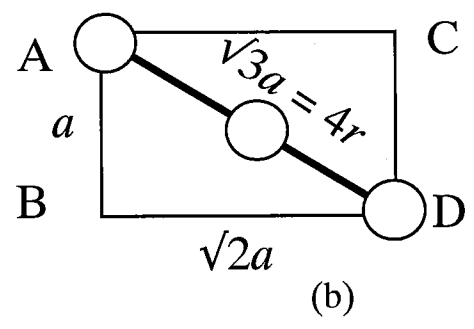
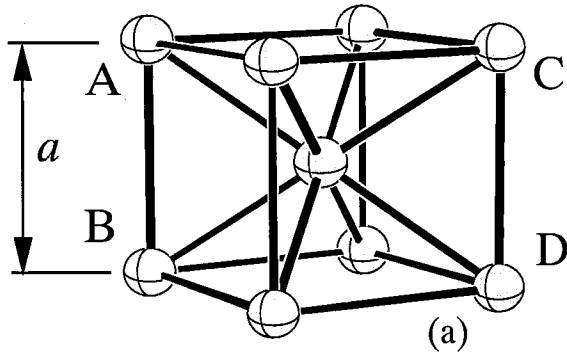
IA	IIA	IIIB								VIII	IB
Li b	Be h										
Na b	Mg h	Al f									
			IVB	VB	VIB	VIIb	VIII				
K b	Ca b	Sc h	Ti h	V b	Cr b	Mn x	Fe b	Co h	Ni f	Cu f	
Rb b	Sr f	Y h	Zr h	Nb b	Mo b	Tc h	Ru h	Rh f	Pd f	Ag f	
Cs b	Ba b	La hc	Hf h	Ta b	W b	Re h	Os h	Ir f	Pt f	Au f	
Fr b	Ra b	Ac f									

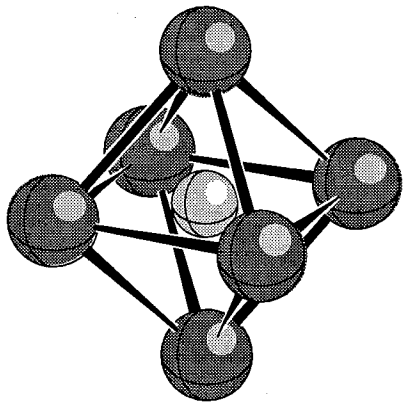
Sy
r.t.
T _m

f = fcc
h = hcp
b = bcc
hc = hc (ABCB)
x = complex

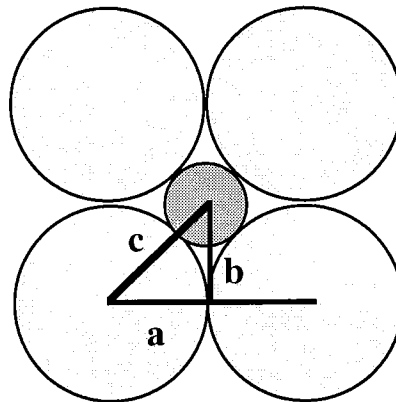
Lanthanides

Ce f	Pr hc	Nd hc	Pm hc	Sm x	Eu b	Gd h	Tb h	Dy h	Ho h	Er h	Tm h	Yb f	Lu h
x	b	b	b	b	b	b	b	b	b	b	b	b	b

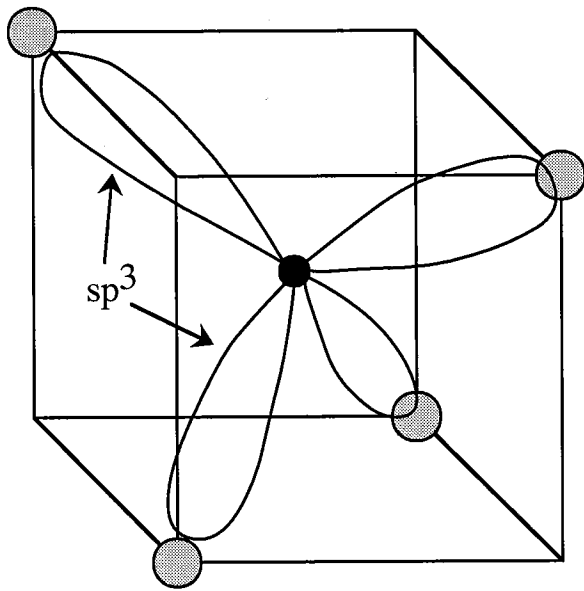
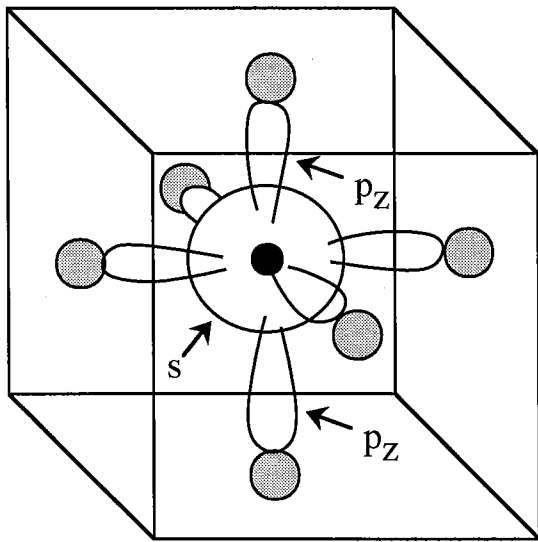
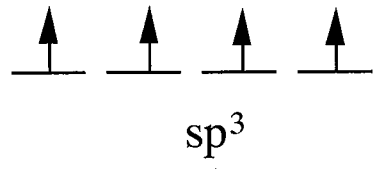
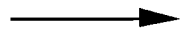
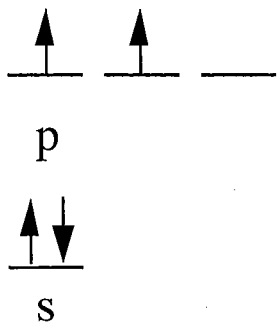


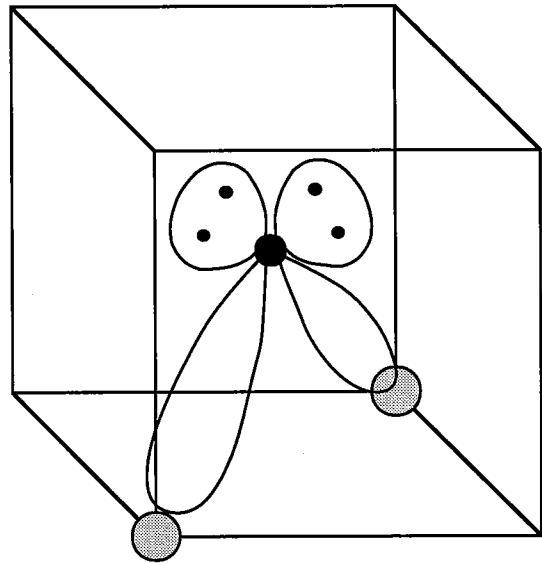
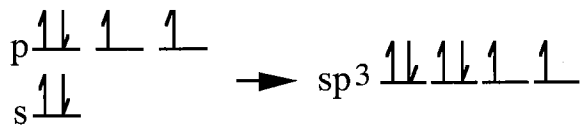
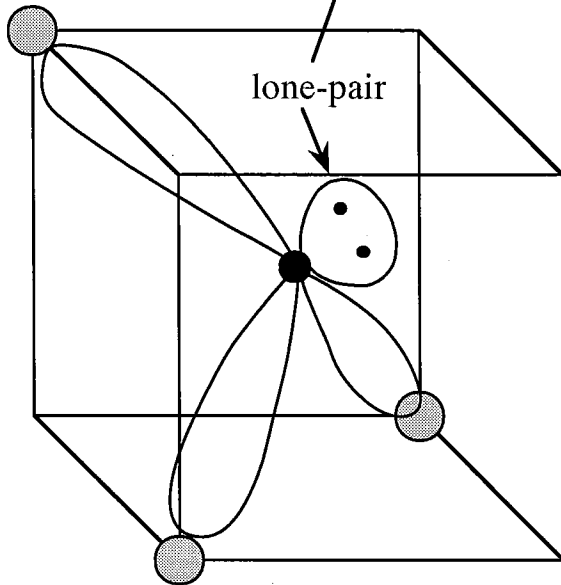
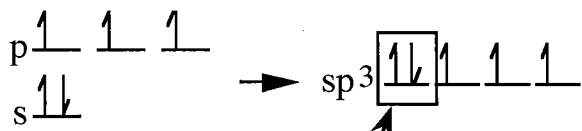


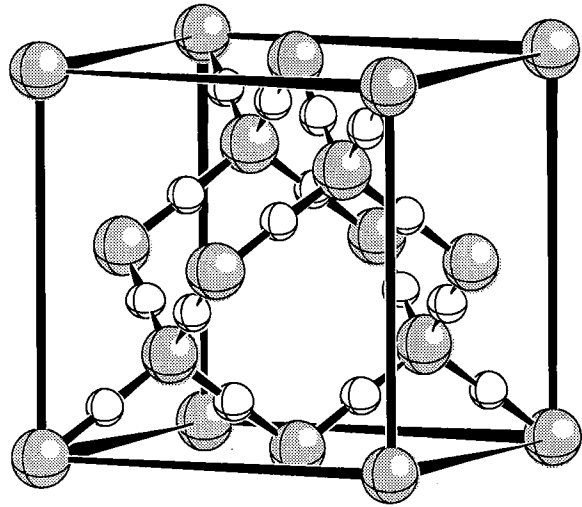
(a)

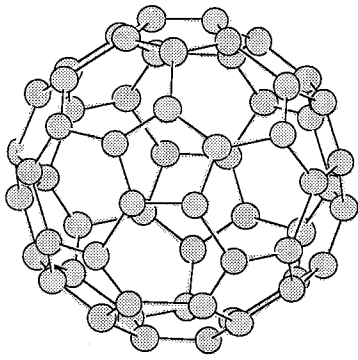


(b)

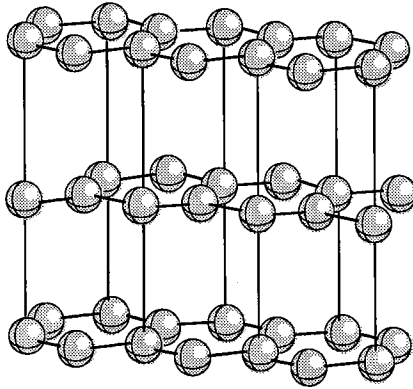




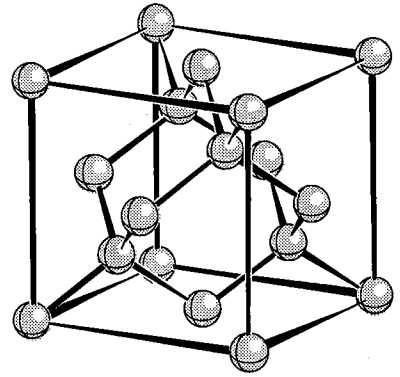




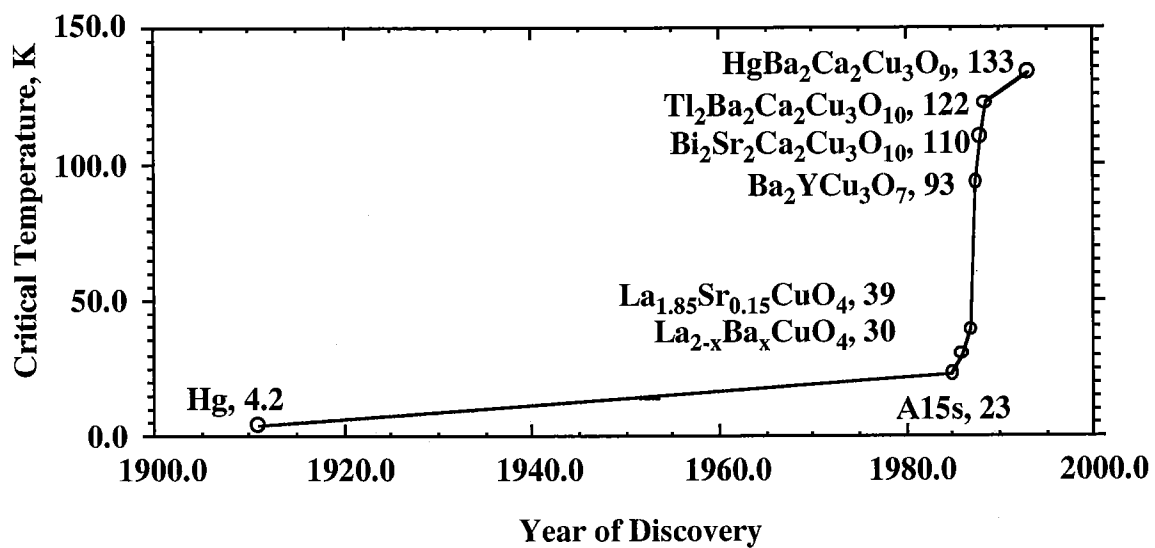
(a)



(b)



(c)



1.15