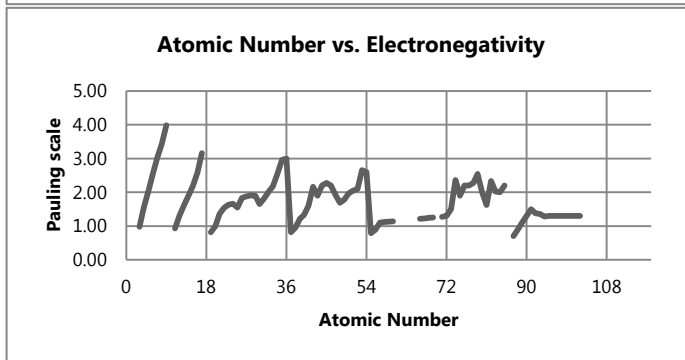
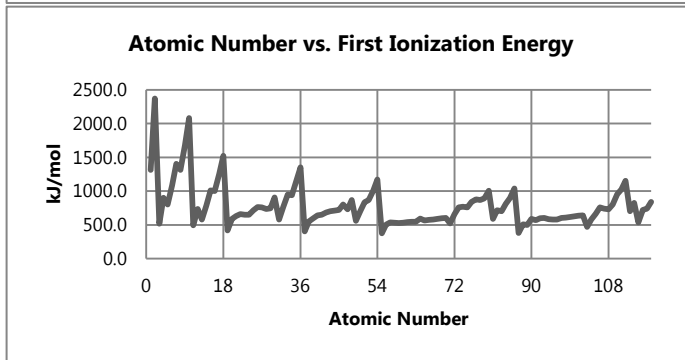
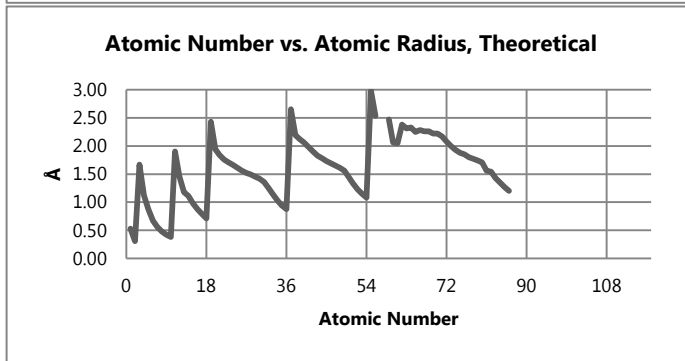
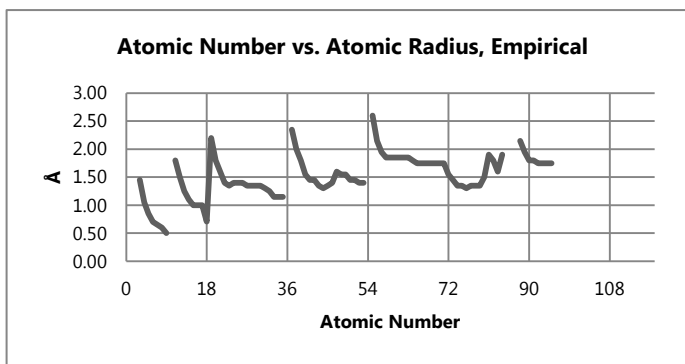


# Periodic Trends

Datasheet with Graphs

Atomic Number	Symbol	Name	Atomic Radius, Empirical (Å)	Atomic Radius, Theoretical (Å)	First Ionization Energy (kJ/mol)	Electronegativity (Pauling scale)
1	H	hydrogen	0.25	0.53	1312.0	2.20
2	He	helium		0.31	2372.3	
3	Li	lithium	1.45	1.67	520.2	0.98
4	Be	beryllium	1.05	1.12	899.5	1.57
5	B	boron	0.85	0.87	800.6	2.04
6	C	carbon	0.70	0.67	1086.5	2.55
7	N	nitrogen	0.65	0.56	1402.3	3.04
8	O	oxygen	0.60	0.48	1313.9	3.44
9	F	fluorine	0.50	0.42	1681.0	3.98
10	Ne	neon		0.38	2080.7	
11	Na	sodium	1.80	1.90	495.8	0.93
12	Mg	magnesium	1.50	1.45	737.7	1.31
13	Al	aluminium	1.25	1.18	577.5	1.61
14	Si	silicon	1.10	1.11	786.5	1.90
15	P	phosphorus	1.00	0.98	1011.8	2.19
16	S	sulfur	1.00	0.88	999.6	2.58
17	Cl	chlorine	1.00	0.79	1251.2	3.16
18	Ar	argon	0.71	0.71	1520.6	
19	K	potassium	2.20	2.43	418.8	0.82
20	Ca	calcium	1.80	1.94	589.8	1.00
21	Sc	scandium	1.60	1.84	633.1	1.36
22	Ti	titanium	1.40	1.76	658.8	1.54
23	V	vanadium	1.35	1.71	650.9	1.63
24	Cr	chromium	1.40	1.66	652.9	1.66
25	Mn	manganese	1.40	1.61	717.3	1.55
26	Fe	iron	1.40	1.56	762.5	1.83
27	Co	cobalt	1.35	1.52	760.4	1.88
28	Ni	nickel	1.35	1.49	737.1	1.91
29	Cu	copper	1.35	1.45	745.5	1.90
30	Zn	zinc	1.35	1.42	906.4	1.65
31	Ga	gallium	1.30	1.36	578.8	1.81
32	Ge	germanium	1.25	1.25	762.0	2.01
33	As	arsenic	1.15	1.14	947.0	2.18
34	Se	selenium	1.15	1.03	941.0	2.55
35	Br	bromine	1.15	0.94	1139.9	2.96
36	Kr	krypton		0.88	1350.8	3.00
37	Rb	rubidium	2.35	2.65	403.0	0.82
38	Sr	strontium	2.00	2.19	549.5	0.95
39	Y	yttrium	1.80	2.12	600.0	1.22
40	Zr	zirconium	1.55	2.06	640.1	1.33
41	Nb	niobium	1.45	1.98	652.1	1.60
42	Mo	molybdenum	1.45	1.90	684.3	2.16
43	Tc	technetium	1.35	1.83	702.0	1.90
44	Ru	ruthenium	1.30	1.78	710.2	2.20
45	Rh	rhodium	1.35	1.73	719.7	2.28
46	Pd	palladium	1.40	1.69	804.4	2.20
47	Ag	silver	1.60	1.65	731.0	1.93
48	Cd	cadmium	1.55	1.61	867.8	1.69
49	In	indium	1.55	1.56	558.3	1.78
50	Sn	tin	1.45	1.45	708.6	1.96
51	Sb	antimony	1.45	1.33	834.0	2.05
52	Te	tellurium	1.40	1.23	869.3	2.10
53	I	iodine	1.40	1.15	1008.4	2.66
54	Xe	xenon		1.08	1170.4	2.60
55	Cs	caesium	2.60	2.98	375.7	0.79
56	Ba	barium	2.15	2.53	502.9	0.89
57	La	lanthanum	1.95		538.1	1.10
58	Ce	cerium	1.85		534.4	1.12
59	Pr	praseodymium	1.85	2.47	527.0	1.13
60	Nd	neodymium	1.85	2.06	533.1	1.14
61	Pm	promethium	1.85	2.05	540.0	
62	Sm	samarium	1.85	2.38	544.5	1.17
63	Eu	euporium	1.85	2.31	547.1	



64	Gd	gadolinium	1.80	2.33	593.4	1.20
65	Tb	terbium	1.75	2.25	565.8	
66	Dy	dysprosium	1.75	2.28	573.0	1.22
67	Ho	holmium	1.75	2.26	581.0	1.23
68	Er	erbium	1.75	2.26	589.3	1.24
69	Tm	thulium	1.75	2.22	596.7	1.25
70	Yb	ytterbium	1.75	2.22	603.4	
71	Lu	lutetium	1.75	2.17	523.5	1.27
72	Hf	hafnium	1.55	2.08	658.5	1.30
73	Ta	tantalum	1.45	2.00	761.0	1.50
74	W	tungsten	1.35	1.93	770.0	2.36
75	Re	rhenium	1.35	1.88	760.0	1.90
76	Os	osmium	1.30	1.85	840.0	2.20
77	Ir	iridium	1.35	1.80	880.0	2.20
78	Pt	platinum	1.35	1.77	870.0	2.28
79	Au	gold	1.35	1.74	890.1	2.54
80	Hg	mercury	1.50	1.71	1007.1	2.00
81	Tl	thallium	1.90	1.56	589.4	1.62
82	Pb	lead	1.80	1.54	715.6	2.33
83	Bi	bismuth	1.60	1.43	703.0	2.02
84	Po	polonium	1.90	1.35	812.1	2.00
85	At	astatine		1.27	899.0	2.20
86	Rn	radon		1.20	1037.0	
87	Fr	francium			380.0	0.70
88	Ra	radium	2.15		509.3	0.90
89	Ac	actinium	1.95		499.0	1.10
90	Th	thorium	1.80		587.0	1.30
91	Pa	protactinium	1.80		568.0	1.50
92	U	uranium	1.75		597.6	1.38
93	Np	neptunium	1.75		604.5	1.36
94	Pu	plutonium	1.75		584.7	1.28
95	Am	americium	1.75		578.0	1.30
96	Cm	curium			581.0	1.30
97	Bk	berkelium			601.0	1.30
98	Cf	californium			608.0	1.30
99	Es	einsteinium			619.0	1.30
100	Fm	fermium			627.0	1.30
101	Md	mendelevium			635.0	1.30
102	No	nobelium			642.0	1.30
103	Lr	lawrencium			470.0	
104	Rf	rutherfordium			579.9	
105	Db	dubnium			664.8	
106	Sg	seaborgium			757.4	
107	Bh	bohrium			742.9	
108	Hs	hassium			733.3	
109	Mt	meitnerium			800.8	
110	Ds	darmstadtium			955.2	
111	Rg	roentgenium			1022.7	
112	Cn	copernicium			1154.9	
113	Uut	ununtrium			704.9	
114	Fl	flerovium			823.9	
115	Uup	ununpentium			538.4	
116	Lv	livermorium			723.6	
117	Uus	ununseptium			742.9	
118	Uuo	ununoctium			839.4	