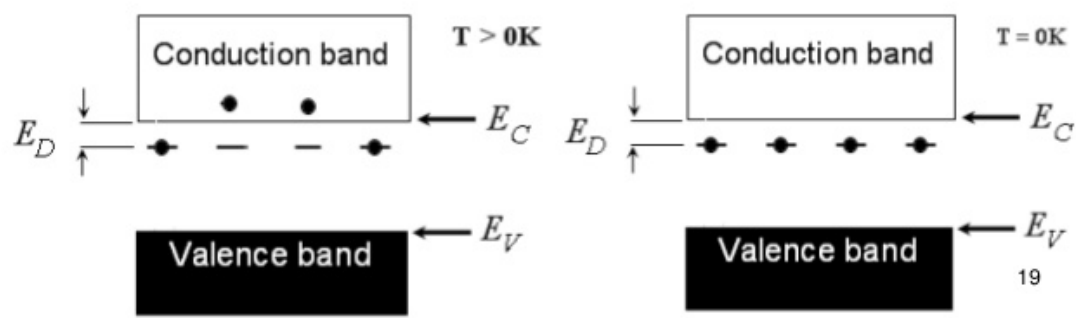
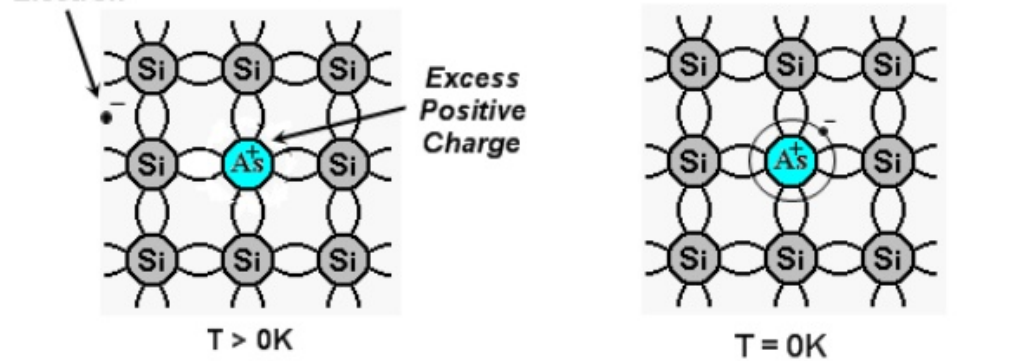


N-type Semiconductor



Periodic Table of the Elements

1 IA 1A	2 IIA 2A											13 IIIA 3A	14 IVA 4A	15 VA 5A	16 VIA 6A	17 VIIA 7A	18 VIIIA 8A																							
1 H Hydrogen 1.008	2 He Helium 4.003											3 Li Lithium 6.941	4 Be Beryllium 9.012											5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180											
11 Na Sodium 22.990	12 Mg Magnesium 24.305	3 Al Aluminum 26.982	4 Si Silicon 28.086	5 P Phosphorus 30.974	6 S Sulfur 32.066	7 Cl Chlorine 35.453	8 Ar Argon 39.948	9 K Potassium 39.098	10 Ca Calcium 40.078	11 Sc Scandium 44.956	12 Ti Titanium 47.867	13 V Vanadium 50.942	14 Cr Chromium 51.996	15 Mn Manganese 54.938	16 Fe Iron 55.845	17 Co Cobalt 58.933	18 Ni Nickel 58.693	19 Cu Copper 63.546	20 Zn Zinc 65.38	21 Ga Gallium 69.723	22 Ge Germanium 72.631	23 As Arsenic 74.922	24 Se Selenium 78.971	25 Br Bromine 79.904	26 Kr Krypton 84.798															
37 Rb Rubidium 84.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.711	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.904	54 Xe Xenon 131.294	55 Cs Cesium 132.905	56 Ba Barium 137.328	57-71 Lanthanide Series	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.085	79 Au Gold 196.967	80 Hg Mercury 200.592	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [208.982]	85 At Astatine 209.987	86 Rn Radon 222.018					
87 Fr Francium 223.020	88 Ra Radium 226.025	89-103 Actinide Series	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [269]	109 Mt Meitnerium [268]	110 Ds Darmstadtium [269]	111 Rg Roentgenium [272]	112 Cn Copernicium [277]	113 Uut Ununtrium unknown	114 Fl Flerovium [289]	115 Uup Ununpentium unknown	116 Lv Livermorium [293]	117 Uus Ununseptium unknown	118 Uuo Ununoctium unknown	119 Ts Tennessine [289]	120 Og Oganesson [289]	121-110 Lanthanide Series	122 Nh Nihonium [286]	123 Fl Flerovium [289]	124 Mc Moscovium [289]	125 Lv Livermorium [293]	126 Ts Tennessine [289]	127 Og Oganesson [289]	128 Uue Ununseptium unknown	129 Uuo Ununoctium unknown	130 Uuq Ununquadium unknown	131 Uur Ununpentium unknown	132 Uus Ununseptium unknown	133 Uuo Ununoctium unknown	134 Uuq Ununquadium unknown	135 Uur Ununpentium unknown	136 Uus Ununseptium unknown	137 Uuo Ununoctium unknown	138 Uuq Ununquadium unknown	139 Uur Ununpentium unknown	140 Uus Ununseptium unknown	141 Uuo Ununoctium unknown

Alkali Metal

Alkaline Earth

Transition Metal

Basic Metal

Semimetal

Nonmetal

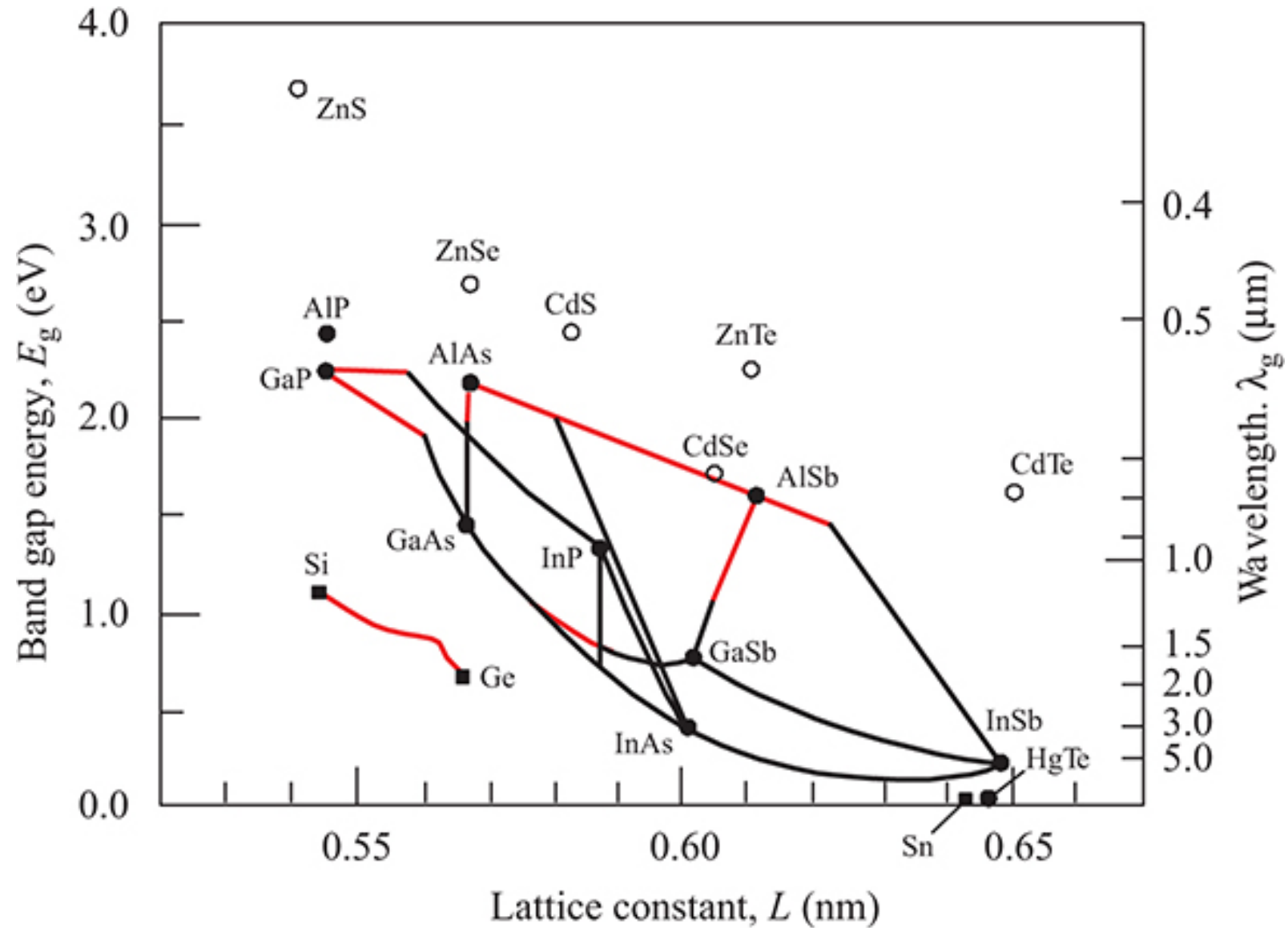
Halogen

Noble Gas

Lanthanide

Actinide

Semiconductors Bandgap (IV, III-V, II-VI)



Semiconductors Energy Gap versus Lattice Constant

