Density STP/Liquid	7874 / 6980
Modulus Bulk/Shear/Young	170 / 82 / 211
Hardness Brinell/Mohs/Vicker	490 / 4 / 608
Conductivity Thermal/Electric	80 / 10
Radius Calc'd/Empirical	156 / 140
Radius Covalent/v.d.Waals	125 / —
Heat Vaporization/Fusion	347 / 13.8
Specific Heat	449
Melting Point	1538°C 1811K
Boiling Point	2861°C 3134K
Electronegativity	1.83
Electron Affinity	15.7
1st Ionization	762.5
Oxidation States	2, 3
Electron Config	[Ar]$4s^2$ $3d^6$
Electron Shells	2,8,14,2
Abundance (Univ.)	0.11%
Discovered	2000

26

Fe

on

5.845

Density STP/Liquid	8900 / 7750
Modulus Bulk/Shear/Young	180 / 75 / 209
Hardness Brinell/Mohs/Vicker	700 / 5 / 1043
Conductivity Thermal/Electric	100 / 17
Radius Calc'd/Empirical	152 / 135
Radius Covalent/v.d.Waals	126 / —
Heat Vaporization/Fusion	375 / 16.2
Specific Heat	421
Melting Point	1495°C 1768K
Boiling Point	2927°C 3200K
Electronegativity	1.88
Electron Affinity	63.7
1st Ionization	760.4
Oxidation States	2, 3
Electron Config	[Ar]$4s^2$ $3d^7$
Electron Shells	2,8,15,2
Abundance (Univ.)	0.00030%
Discovered	1735

27

Co

Cobalt

58.933

Density STP/Liquid	8908 / 7810
Modulus Bulk/Shear/Young	180 / 76 / 200
Hardness Brinell/Mohs/Vicker	700 / 4 / 638
Conductivity Thermal/Electric	91 / 14
Radius Calc'd/Empirical	149 / 135
Radius Covalent/v.d.Waals	121 / 163
Heat Vaporization/Fusion	378 / 17.2
Specific Heat	445
Melting Point	1455°C 1728K
Boiling Point	2913°C 3186K
Electronegativity	1.91
Electron Affinity	112
1st Ionization	737.1
Oxidation States	2
Electron Config	[Ar]$4s^2$ $3d^8$
Electron Shells	2,8,16,2
Abundance (Univ.)	0.0060%
Discovered	1751

28

Ni

Nickel

58.693

Density STP/Liquid	
Modulus Bulk/Shear/Young	
Hardness Brinell/Mohs/Vicker	
Conductivity Thermal/Electric	
Radius Calc'd/Empirical	
Radius Covalent/v.d.Waals	
Heat Vaporization/Fusion	
Specific Heat	
Melting Point	
Boiling Point	
Electronegativity	
Electron Affinity	
1st Ionization	
Oxidation States	
Electron Config	
Electron Shells	
Abundance (Univ.)	
Discovered	

29

Cu

Coppe

63.54

Density STP/Liquid	12370 / 10650
Modulus Bulk/Shear/Young	220 / 173 / 447
Hardness Brinell/Mohs/Vicker	2160 / 6.5 / —
Conductivity Thermal/Electric	120 / 14
Radius Calc'd/Empirical	178 / 130
Radius Covalent/v.d.Waals	126 / —
Heat Vaporization/Fusion	580 / 25.7
Specific Heat	238
Melting Point	2334°C 2607K
Boiling Point	4150°C 4423K
Electronegativity	2.2
Electron Affinity	101.3
1st Ionization	710.2
Oxidation States	3, 4
Electron Config	[Kr]$5s^1$ $4d^7$
Electron Shells	2,8,18,15,1
Abundance (Univ.)	4.0×10^{-7}%
Discovered	1844

44

Ru

uthenium

01.07

Density STP/Liquid	12450 / 10700
Modulus Bulk/Shear/Young	380 / 150 / 275
Hardness Brinell/Mohs/Vicker	1100 / 6 / 1246
Conductivity Thermal/Electric	150 / 23
Radius Calc'd/Empirical	173 / 135
Radius Covalent/v.d.Waals	135 / —
Heat Vaporization/Fusion	495 / 21.7
Specific Heat	240
Melting Point	1964°C 2237K
Boiling Point	3695°C 3968K
Electronegativity	2.28
Electron Affinity	109.7
1st Ionization	719.7
Oxidation States	3
Electron Config	[Kr]$5s^1$ $4d^8$
Electron Shells	2,8,18,16,1
Abundance (Univ.)	6.0×10^{-8}%
Discovered	1803

45

Rh

Rhodium

102.91

Density STP/Liquid	12023 / 10380
Modulus Bulk/Shear/Young	180 / 44 / 121
Hardness Brinell/Mohs/Vicker	37.3 / 4.75 / 461
Conductivity Thermal/Electric	72 / 10
Radius Calc'd/Empirical	169 / 140
Radius Covalent/v.d.Waals	131 / 163
Heat Vaporization/Fusion	380 / 16.7
Specific Heat	240
Melting Point	1554.9°C 1828.1K
Boiling Point	2963°C 3236K
Electronegativity	2.20
Electron Affinity	53.7
1st Ionization	804.4
Oxidation States	2, 4
Electron Config	[Kr]$4d^{10}$
Electron Shells	2,8,18,18
Abundance (Univ.)	2.0×10^{-7}%
Discovered	1803

46

Pd

Palladium

106.42

Density STP/Li	
Modulus Bulk/S	
Hardness Brinell	
Conductivity Therm	
Radius Calc'd	
Radius Covale	
Heat Vapori	
Specifi	
Meltin	
Boiling	
Electro	
Electro	
Electro	
1st Ion	
Oxidat	
Electro	
Electro	
Abund	
Discov	

47

Ag

Silver

107.87

Density STP/Liquid	22610 / 20000
Modulus Bulk/Shear/Young	— / 222 / —
Hardness Brinell/Mohs/Vicker	3920 / 7 / —
Conductivity Thermal/Electric	88 / 12
Radius Calc'd/Empirical	185 / 130
Radius Covalent/v.d.Waals	128 / —
Heat Vaporization/Fusion	630 / 31
Specific Heat	130
Melting Point	3033°C 3306K
Boiling Point	5012°C 5285K
Electronegativity	2.2
Electron Affinity	106.1
1st Ionization	840
Oxidation States	4
Electron Config	[Xe]$6s^2$ $4f^{14}$ $5d^6$
Electron Shells	2,8,18,32,14,2
Abundance (Univ.)	3.0×10^{-7}%
Discovered	1803

76

Os

Density STP/Liquid	22650 / 19000
Modulus Bulk/Shear/Young	320 / 210 / 528
Hardness Brinell/Mohs/Vicker	1670 / 6.5 / 1760
Conductivity Thermal/Electric	150 / 21
Radius Calc'd/Empirical	180 / 135
Radius Covalent/v.d.Waals	137 / —
Heat Vaporization/Fusion	560 / 26
Specific Heat	131
Melting Point	2466°C 2739K
Boiling Point	4428°C 4701K
Electronegativity	2.20
Electron Affinity	151
1st Ionization	880
Oxidation States	3, 4
Electron Config	[Xe]$6s^2$ $4f^{14}$ $5d^7$
Electron Shells	2,8,18,32,15,2
Abundance (Univ.)	2.0×10^{-7}%
Discovered	1803

77

Ir

Iridi

Density STP/Liquid	21090 / 19770
Modulus Bulk/Shear/Young	230 / 61 / 168
Hardness Brinell/Mohs/Vicker	392 / 3.5 / 549
Conductivity Thermal/Electric	72 / 9.4
Radius Calc'd/Empirical	177 / 135
Radius Covalent/v.d.Waals	128 / 175
Heat Vaporization/Fusion	490 / 20
Specific Heat	133
Melting Point	1768.3°C 2041.4K
Boiling Point	3825°C 4098K
Electronegativity	2.28
Electron Affinity	205.3
1st Ionization	870
Oxidation States	2, 4
Electron Config	[Xe]$6s^1$ $4f^{14}$ $5d^9$
Electron Shells	2,8,18,32,17,1
Abundance (Univ.)	5.0×10^{-7}%
Discovered	1735

78

Pt

Platin

Density STP/Li	
Modulus Bulk/S	
Hardness Brinell	
Conductivity Therm	
Radius Calc'd	
Radius Covale	
Heat Vapori	
Specifi	
Meltin	
Boiling	
Electro	
Electro	
Electro	
1st Ion	
Oxidat	
Electro	
Electro	
Abund	
Discov	

79

Au

Gold

Density STP/Liquid	19300 / 17310
Modulus Bulk/Shear/Young	220 / 79 / 78
Hardness Brinell/Mohs/Vicker	216 / 2.5 / 251
Conductivity Thermal/Electric	318 / 45.2
Radius Calc'd/Empirical	174 / 135
Radius Covalent/v.d.Waals	136 / 166
Heat Vaporization/Fusion	342 / 12.7
Specific Heat	129
Melting Point	1064°C 1337K
Boiling Point	2856°C 3129K
Electronegativity	2.54
Electron Affinity	222.8
1st Ionization	890.1
Oxidation States	1, 3
Electron Config	[Xe]$6s^1$ $4f^{14}$ $5d^{10}$
Electron Shells	2,8,18,32,18,1
Abundance (Univ.)	1.0×10^{-7}%
Discovered	1803