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

Co

Cobalt

58.933

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

Ni

Nickel

58.693

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

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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

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Pd

Palladium

106.42

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

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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

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