

PERIODIC TABLE

Atomic Properties of the Elements

Period

Group
1
IA

1 ²S_{1/2}
H
Hydrogen
1.008*
1s
13.5984

2
IIA

3 ²S_{1/2}
Li
Lithium
6.94*
1s²2s
5.3917

4 ¹S₀
Be
Beryllium
9.0121831
1s²2s²
9.3227

11 ²S_{1/2}
Na
Sodium
22.98976928
[Ne]3s
5.1391

12 ¹S₀
Mg
Magnesium
24.305*
[Ne]3s²
7.6462

19 ²S_{1/2}
K
Potassium
39.0983
[Ar]4s
4.3407

20 ¹S₀
Ca
Calcium
40.078
[Ar]4s²
6.1132

37 ²S_{1/2}
Rb
Rubidium
85.4678
[Kr]5s
4.1771

55 ²S_{1/2}
Cs
Cesium
132.9054520
[Xe]6s
3.8939

87 ²S_{1/2}
Fr
Francium
(223)
[Rn]7s
4.0727

3
IIIB

21 ²D_{3/2}
Sc
Scandium
44.955908
[Ar]3d4s
6.5615

39 ²D_{3/2}
Y
Yttrium
88.90584
[Kr]4d5s
6.2173

56 ¹S₀
Ba
Barium
137.327
[Xe]6s²
5.2117

88 ¹S₀
Ra
Radium
(226)
[Rn]7s²
5.2784

57 ²D_{3/2}
La
Lanthanum
138.90547
[Xe]5d6s²
5.5769

89 ²D_{3/2}
Ac
Actinium
(227)
[Rn]6d7s²
5.3802

90 ³F₂
Th
Thorium
232.0377
[Rn]6d7s²
6.3067

4
IVB

22 ³F₂
Ti
Titanium
47.867
[Ar]3d4s²
6.8281

40 ³F₂
Zr
Zirconium
91.224
[Kr]4d5s²
6.6339

72 ³F₂
Hf
Hafnium
178.49
[Xe]4f145d6s²
6.8251

104 ³F₂
Rf
Rutherfordium
(261)
[Rn]5f146d7s²
6.01

58 ¹G₄
Ce
Cerium
140.116
[Xe]4f5d6s²
5.5386

91 ⁴K_{11/2}
Pa
Protactinium
231.03688
[Rn]5f26d7s²
5.89

92 ⁵L₆
U
Uranium
238.02891
[Rn]5f36d7s²
6.1941

5
VB

23 ⁴F_{3/2}
V
Vanadium
50.9415
[Ar]3d4s²
6.7462

41 ⁶D_{5/2}
Nb
Niobium
92.90637
[Kr]4d5s
6.7589

73 ⁴F_{3/2}
Ta
Tantalum
180.94788
[Xe]4f145d6s²
7.5496

105 ⁴F_{3/2}
Db
Dubnium
(268)
[Rn]5f146d7s²
6.8

59 ⁴I_{9/2}
Pr
Praseodymium
140.907
[Xe]4f6s²
5.473

93 ⁶L_{11/2}
Np
Neptunium
(237)
[Rn]5f6d7s²
6.2655

94 ⁷F₀
Pu
Plutonium
(244)
[Rn]5f7s²
6.0258

6
VIB

24 ⁷S₃
Cr
Chromium
51.9961
[Ar]3d54s
6.7665

42 ⁷S₃
Mo
Molybdenum
95.95
[Kr]4d5s
7.0924

74 ⁵D₀
W
Tungsten
183.84
[Xe]4f145d6s²
7.8640

106 ³G_{7/2}
Sg
Seaborgium
(266)
[Rn]5f146d7s²
7.8

60 ⁵I₄
Nd
Neodymium
144.242
[Xe]4f6s²
5.5250

95 ⁸S_{7/2}
Am
Americium
(243)
[Rn]5f7s²
5.9738

96 ⁹D₂
Cm
Curium
(247)
[Rn]5f7d7s²
5.9914

7
VIIB

25 ⁶S_{5/2}
Mn
Manganese
54.938044
[Ar]3d54s²
7.4340

43 ⁶S_{5/2}
Tc
Technetium
(98)
[Kr]4d5s²
7.1194

75 ⁶S_{5/2}
Re
Rhenium
186.207
[Xe]4f145d6s²
7.8335

107 ⁵L₆
Bh
Bohrium
(264)
[Rn]5f146d7s²
7.7

61 ⁶H_{5/2}
Pm
Promethium
(145)
[Xe]4f6s²
5.582

97 ⁶H_{5/2}
Bk
Berkelium
(247)
[Rn]5f7s²
6.1978

98 ⁵I₈
Cf
Californium
(251)
[Rn]5f107s²
6.2817

8
VIII

26 ⁵D₄
Fe
Iron
55.845
[Ar]3d64s²
7.9025

44 ⁵F₅
Ru
Ruthenium
101.07
[Kr]4d7s
7.3605

76 ⁵D₄
Os
Osmium
190.23
[Xe]4f145d6s²
8.4382

108 ⁵L₆
Hs
Hassium
(270)
[Rn]5f146d7s²
7.6

62 ⁷F₀
Sm
Samarium
150.36
[Xe]4f6s²
5.6437

99 ⁴I_{15/2}
Es
Einsteinium
(252)
[Rn]5f117s²
6.3676

100 ³H₈
Fm
Fermium
(257)
[Rn]5f127s²
6.50

9
VIII

27 ⁴F_{9/2}
Co
Cobalt
58.933194
[Ar]3d74s²
7.8810

45 ⁴F_{9/2}
Rh
Rhodium
102.90550
[Kr]4d8s
7.5762

77 ⁴F_{9/2}
Ir
Iridium
192.217
[Xe]4f145d6s²
8.9670

109 ⁵L₆
Mt
Meitnerium
(268)
[Rn]5f146d7s²
7.6

63 ⁸S_{7/2}
Eu
Europium
151.964
[Xe]4f7s²
5.6704

101 ²F_{7/2}
Md
Mendelevium
(258)
[Rn]5f137s²
6.58

102 ¹S₀
No
Nobelium
(259)
[Rn]5f147s²
6.65

10
VIII

28 ³F₄
Ni
Nickel
58.6934
[Ar]3d84s²
7.6399

46 ¹S₀
Pd
Palladium
106.42
[Kr]4d10
8.3369

78 ³D₃
Pt
Platinum
195.084
[Xe]4f145d96s
8.9588

110 ⁵L₆
Ds
Darmstadtium
(281)
[Rn]5f146d7s²
7.6

64 ⁹D₂
Gd
Gadolinium
157.25
[Xe]4f7s²
5.6704

103 ²P_{1/2}
Lr
Lawrencium
(262)
[Rn]5f147s²
4.90

111 ²S_{1/2}
Rg
Roentgenium
(280)
[Rn]5f146d7s²
7.6

☐ Solids
☐ Liquids
☐ Gases
☐ Artificially Prepared

11
IB

29 ²S_{1/2}
Cu
Copper
63.546
[Ar]3d104s
7.264

47 ²S_{1/2}
Ag
Silver
107.8682
[Kr]4d105s
8.9938

79 ²S_{1/2}
Au
Gold
196.966569
[Xe]4f145d106s
9.2256

112 ¹S₀
Cn
Copernicium
(285)
[Rn]5f146d7s²
10.4375

65 ⁶H_{15/2}
Tb
Terbium
158.92535
[Xe]4f9s²
5.8638

104 ³F₂
Rf
Rutherfordium
(261)
[Rn]5f146d7s²
6.01

113 ²P_{1/2}
Uut
Ununtrium
(284)
[Rn]5f146d7s²
7.6

12
IIB

30 ¹S₀
Zn
Zinc
65.38
[Ar]3d104s²
9.3942

48 ¹S₀
Cd
Cadmium
112.414
[Kr]4d105s²
8.9938

80 ¹S₀
Hg
Mercury
200.592
[Xe]4f145d106s²
10.4375

114 ¹S₀
Fl
Flerovium
(289)
[Rn]5f146d7s²
7.6

66 ⁵I₈
Dy
Dysprosium
162.500
[Xe]4f10s²
5.9391

105 ⁴K_{11/2}
Pa
Protactinium
(231)
[Rn]5f26d7s²
5.89

115 ⁴S_{3/2}
Uup
Ununpentium
(288)
[Rn]5f146d7s²
7.6

13
IIIA

31 ²P_{1/2}
Ga
Gallium
69.723
[Ar]3d104s²4p
5.9993

49 ²P_{1/2}
In
Indium
114.818
[Kr]4d105s²5p
7.5864

81 ²P_{1/2}
Tl
Thallium
204.38*
[Hg]6p
6.1083

113 ²P_{1/2}
Uut
Ununtrium
(284)
[Rn]5f146d7s²
7.6

67 ⁴I_{15/2}
Ho
Holmium
164.93033
[Xe]4f11s²
6.0215

106 ³F₂
Rf
Rutherfordium
(262)
[Rn]5f146d7s²
6.01

116 ⁴S_{3/2}
Uup
Ununpentium
(288)
[Rn]5f146d7s²
7.6

14
IVA

32 ³P₀
Ge
Germanium
72.630
[Ar]3d104s²4p
7.8994

50 ³P₀
Sn
Tin
118.710
[Kr]4d105s²5p
7.3439

82 ³P₀
Pb
Lead
207.2
[Hg]6p²
7.4167

114 ³P₀
Fl
Flerovium
(289)
[Rn]5f146d7s²
7.6

68 ³H₈
Er
Erbium
167.259
[Xe]4f12s²
6.1077

107 ²F_{7/2}
Md
Mendelevium
(258)
[Rn]5f137s²
6.58

117 ²P_{3/2}
Uus
Ununseptium
(294)
[Rn]5f146d7s²
7.6

15
VA

33 ⁴S_{3/2}
As
Arsenic
74.921595
[Ar]3d104s²4p
7.8986

51 ⁴S_{3/2}
Sb
Antimony
121.760
[Kr]4d105s²5p
8.6084

83 ⁴S_{3/2}
Bi
Bismuth
208.98040
[Hg]6p³
7.2855

115 ⁴S_{3/2}
Uup
Ununpentium
(288)
[Rn]5f146d7s²
7.6

69 ²F_{7/2}
Tm
Thulium
168.93422
[Xe]4f13s²
6.1843

108 ¹S₀
No
Nobelium
(259)
[Rn]5f147s²
6.65

118 ¹S₀
Rn
Radon
(222)
[Hg]6p⁶
10.7485

16
VIA

34 ³P₂
Se
Selenium
78.971
[Ar]3d104s²4p
9.7524

52 ³P₂
Te
Tellurium
127.60
[Kr]4d105s²5p
9.0097

84 ³P₂
Po
Polonium
(209)
[Hg]6p⁴
8.414

116 ⁴S_{3/2}
Uup
Ununpentium
(288)
[Rn]5f146d7s²
7.6

70 ¹S₀
Yb
Ytterbium
173.054
[Xe]4f14s²
6.2542

109 ²F_{7/2}
Md
Mendelevium
(258)
[Rn]5f137s²
6.58

119 ²P_{3/2}
Uuo
Ununoctium
(294)
[Rn]5f146d7s²
7.6

17
VIIA

35 ²P_{3/2}
Br
Bromine
79.904*
[Ar]3d104s²4p
11.8138