

Periodic Table of the Elements

1

²S_{1/2}

H

Hydrogen

1.008

1s

13.5984

2

¹S₀

He

Helium

4.0026

1s²

24.5874

3

²S_{1/2}

Li

Lithium

6.94

1s²2s

5.3917

4

¹S₀

Be

Beryllium

9.0122

1s²2s²

9.3227

6

³P₀

C

Carbon

12.011

1s²2s²2p²

11.2603

Atomic Number

Symbol

Name

Mass

Ground-State Configuration

Ionisation Energy (eV)

5

³P₀

B

Boron

10.81

1s²2s²2p

8.2980

6

³P₀

C

Carbon

12.011

1s²2s²2p²

11.2603

7

⁴S_{3/2}

N

Nitrogen

14.007

1s²2s²2p³

14.5341

8

³P₂

O

Oxygen

15.999

1s²2s²2p⁴

13.6181

9

²P_{3/2}^o

F

Fluorine

18.998

1s²2s²2p⁵

17.4228

10

¹S₀

Ne

Neon

20.180

1s²2s²2p⁶

21.5645

11

²S_{1/2}

Na

Sodium

22.990

(Ne)3s

5.1391

12

¹S₀

Mg

Magnesium

24.305

(Ne)3s²

7.6462

19

²S_{1/2}

K

Potassium

39.098

(Ar)4s

4.3407

20

¹S₀

Ca

Calcium

40.078

(Ar)4s²

6.1132

21

²D_{3/2}

Sc

Scandium

44.956

(Ar)3d4s²

6.5615

22

³F₂

Ti

Titanium

47.867

(Ar)3d²4s²

6.8281

23

⁴F_{3/2}

V

Vanadium

50.942

(Ar)3d³4s²

6.7462

24

⁷S₃

Cr

Chromium

51.996

(Ar)3d⁴4s²

6.7665

25

⁶S_{5/2}

Mn

Manganese

54.938

(Ar)3d⁵4s²

7.4340

26

⁵D₄

Fe

Iron

55.845

(Ar)3d⁶4s²

7.9025

27

⁴F_{9/2}

Co

Cobalt

58.933

(Ar)3d⁷4s²

7.8810

28

³F₄

Ni

Nickle

58.693

(Ar)3d⁸4s²

7.6399

29

²S_{1/2}

Cu

Copper

63.546

(Ar)3d⁹4s²

7.7264

30

¹S₀

Zn

Zinc

65.38

(Ar)3d¹⁰4s²

9.3942

31

²P_{1/2}^o

Ga

Gallium

69.723

(Ar)3d¹⁰4s²4p

5.9993

32

³P₀

Ge

Germanium

72.630

(Ar)3d¹⁰4s²4p²

7.8994

33

⁴S_{3/2}

As

Arsenic

74.922

(Ar)3d¹⁰4s²4p³

9.7886

34

³P₂

Se

Selenium

78.971

(Ar)3d¹⁰4s²4p⁴

9.7524

35

²P_{3/2}^o

Br

Bromine

79.904

(Ar)3d¹⁰4s²4p⁵

11.8138

36

¹S₀

Kr

Krypton

83.798

(Ar)3d¹⁰4s²4p⁶

13.9996

37

²S_{1/2}

Rb

Rubidium

85.468

(Kr)5s

4.1771

38

^{6.2173}

Sr

Strontium

87.62

(Kr)5s²

5.6949

39

²D_{3/2}

Y

Yttrium

88.906

(Kr)4d5s²

6.6341

40

³F₂

Zr

Zirconium

91.224

(Kr)4d²5s²

6.7589

41

⁶D_{1/2}

Nb

Niobium

92.906

(Kr)4d³5s²

7.0924

42

⁷S₃

Mo

Molybdenum

95.95

(Kr)4d⁴5s²

7.1194

43

⁶S_{5/2}

Tc

Technetium

(98)

(Kr)4d⁵5s²

7.3605

44

⁵F₅

Ru

Ruthenium

101.07

(Kr)4d⁶5s²

7.3605

45

⁴F_{9/2}

Rh

Rhodium

102.91106.42

(Kr)4d⁷5s²

7.4589

46

¹S₀

Pd

Palladium

106.42

(Kr)4d⁸5s²

8.3369

47

²S_{1/2}

Ag

Silver

107.87

(Kr)4d⁹5s²

7.5762

48

¹S₀

Cd

Cadmium

112.41

(Kr)4d¹⁰5s²

8.9938

49

²P_{1/2}^o

In

Indium

114.82

(Kr)4d¹⁰5s²5p

5.7864

50

³P₀

Sn

Tin

118.71

(Kr)4d¹⁰5s²5p²

7.3439

51

⁴S_{3/2}

Sb

Antimony

121.76

(Kr)4d¹⁰5s²5p³

8.6084

52

³P₂

Te

Tellurium

127.60

(Kr)4d¹⁰5s²5p⁴

9.0097

53

²P_{3/2}^o

I

Iodine

126.90

(Kr)4d¹⁰5s²5p⁵

10.4513

54

¹S₀

Xe

Xenon

131.29

(Kr)4d¹⁰5s²5p⁶

12.1298

55

²S_{1/2}

Cs

Caesium

132.91

(Xe)6s

3.8939

56

¹S₀

Ca

Calcium

137.33

(Xe)6s²

5.2117

57–71

Lanthanides

72

³F₂

Hf

Hafnium

178.49

(Xe)4f¹⁴5d²6s²

6.8251

73

⁴F_{3/2}

Ta

Tantalum

180.95

(Xe)4f¹⁴5d³6s²

7.5496

74

⁵D₀

W

Tungsten

183.84

(Xe)4f¹⁴5d⁴6s²

7.8640

75

⁶S_{3/2}

Re

Rhenium

186.21

(Xe)4f¹⁴5d⁵6s²

7.8335

76

⁵D₄

Os

Osmium

190.23

(Xe)4f¹⁴5d⁶6s²

8.4382

77

⁴F_{9/2}

Ir

Iridium

192.22

(Xe)4f¹⁴5d⁷6s²

8.9670

78

³D₃

Pt

Platinum

195.08

(Xe)4f¹⁴5d⁸6s²

8.9588

79

²S_{1/2}

Au

Gold

196.97

(Xe)4f¹⁴5d⁹6s²

9.2256

80

¹S₀

Hg

Mercury

200.59

(Xe)4f¹⁴5d¹⁰6s²

10.4375

81

²P_{1/2}^o

Tl

Thallium

204.38

(Hg)6p

6.1083

82

³P₀

Pb

Lead

207.2

(Hg)6p²

7.4167

83

⁴S_{3/2}

Bi

Bismuth

208.98

(Hg)6p³

7.2855

84

³P₂

Po

Polonium

(209)

(Hg)6p⁴

8.414

85

²P_{3/2}^o

At

Astatine

(210)

(Hg)6p⁵

9.3175

86

¹S₀

Rn

Radon

(222)

(Hg)6p⁶

10.7485

87

²S_{1/2}

Fr

Francium

(223)

(Rn)7s

4.0727

88

¹S₀

Ra

Radium

(226)

(Rn)7s²

5.2784

89–103

Actinides

104

³F₂

Rf

Rutherfordium

(267)

(Rn)5f¹⁴6d²7s²

6.02

105

⁴F_{3/2}

Db

Dubnium

(268)

(Rn)5f¹⁴6d³7s²

6.8

106

⁰

Sg

Seaborgium

(271)

(Rn)5f¹⁴6d⁴7s²

7.8

107

^{5/2}

Bh

Bohrium

(270)

(Rn)5f¹⁴6d⁵7s²

7.7

108

⁴

Hs

Hassium

(269)

(Rn)5f¹⁴6d⁶7s²

7.6

109

⁵

Mt

Meitnerium

(278)

110

⁵

Ds

Darmstadtium

(281)

111

⁵

Rg

Roentgenium

(282)

112

⁵

Cn

Copernicium

(285)

113

⁵

Nh

Nihonium

(286)

114

⁵

Fl

Flerovium

(289)

115

⁵

Mc

Moscovium

(289)

116

⁵

Lv

Livermorium

(293)

117

⁵

Ts

Tennessine

(294)

118

⁵

Og

Organesson

(294)

57

²D_{3/2}

La

Lanthanum

138.91

(Xe)5d6s²

5.5769

58

¹G₄^o

Ce

Cerium

140.116

(Xe)4f5d6s²

5.5386

60

⁵I₄

Nd

Neodymium

144.24

(Xe)4f⁴6s²

5.5250

61

⁶H_{5/2}^o

Pm

Promethium

(145)

(Xe)4f⁶6s²

5.577

62

⁷F_o

Sm

Samarium

150.36

(Xe)4f⁶6s²

5.6437

63

⁸S_{7/2}^o

Eu

Europium

151.96

(Xe)4f⁷6s²

5.6704

64

⁹D₂^o

Gd

Gadolinium

157.25

(Xe)4f⁷5d6s²

6.1498

65

⁶H_{15/2}^o

Tb

Terbium

158.93

(Xe)4f⁹6s²

5.8638

66

⁵I₈

Dy

Dysprosium

162.50

(Xe)4f¹⁰6s²

5.9391

67

⁴I_{15/2}^o

Ho

Holmium

164.93

(Xe)4f¹¹6s²

6.0215

68

³H₆

Er

Erbium

167.26

(Xe)4f¹²6s²

6.1077

69

²F_{7/2}^o

Tm

Thulium

168.93

(Xe)4f¹³6s²

6.1843

70

¹S₀

Tb

Ytterbium

173.05

(Xe)4f¹⁴6s²

6.1843

71

²D_{3/2}

Lu

Lutetium

174.97

(Xe)4f¹⁴5d6s²

5.4259

89

²D_{3/2}

Ac

Actinium

(227)

(Rn)6d7s²

5.3802

90

³F₂

Th

Thorium

232.04

(Rn)6d²7s²

6.3067

92

⁵L₆^o

U

Uranium

238.03

(Rn)5f³6d7s²

6.1941

93

⁶L_{11/2}^o

Np

Neptunium

((237))

(Rn)5f⁴6d7s²

6.2655

94

⁷F_o

Pu

Plutonium

(244)

(Rn)5f⁶7s²

6.0258

95

⁸S_{7/2}^o

Am

Americium

(243)

(Rn)5f⁷7s²

5.9738

96

⁹D₂^o

Cm

Curium

(247)

(Rn)5f⁷6d7s²

5.9914

97

⁶H_{15/2}^o

Bk

Berkelium

(247)

(Rn)5f⁹7s²

6.1978

98

⁵I₈

Cf

Californium

(251)

(Rn)5f¹⁰7s²

6.2817

99

⁴I_{15/2}^o

Es

Einsteinium

(252)

(Rn)5f¹¹7s²

6.50

100

³H₆

Fm

Fermium

(257)

(Rn)6f¹²7s²

6.50

101

²F_{7/2}^o

Md

Medeleevium

(258)

(Rn)5f¹³7s²

6.58

102

¹S₀

No

Nobelium

(259)

(Xe)5f¹⁴7s²

6.66

103

²D_{3/2}

Lr

Lawrencium

(266)

(Rn)5f¹⁴7s²7p

4.95

Periodic Table of the Elements