

Periodic Table of Elements

Group

1 IA

1
1.008
1
1
H
Hydrogen
1s¹

atomic number
relative atomic mass[D]
atomic mass[A]
atomic radius[A]

43
[98]
2.16
Tc
Technetium
[Kr]4d⁵5s²

oxidation states
1st ionisation energy[eV]
affinity[eV]
symbol
name
ground state configuration

solid@273K
gas@273K
liquid@273K
unknown

radioactive
lab made

Alkali Metal

Transitional Metal

Non metal

Lanthanide

Alkaline Earth Metal

Post Trans Metal

Halogen

Actinide

Metalloid

Noble gas

Unknown properties

18 VIIIA

2
4.003
1
1
He
Helium
1s²

10
20.180
10
10
Ne
Neon
[He]2s²2p⁶

18
39.95
18
18
Ar
Argon
[Ne]3s²3p⁶

36
79.904
36
36
Kr
Krypton
[Ar]3d¹⁰4s²4p⁶

54
131.29
54
54
Xe
Xenon
[Kr]4d¹⁰5s²5p⁶

86
222
86
86
Rn
Radon
[Xe]4f¹⁴5d¹⁰6s²6p⁶

118
284
118
118
Og
Oganesson
[Og]5f¹⁴6d¹⁰7s²7p⁶

3
6.94
3
3
Li
Lithium
[He]2s¹

4
9.012
4
4
Be
Beryllium
[He]2s²

5
9.012
5
5
B
Boron
[He]2s²2p¹

6
10.81
6
6
C
Carbon
[He]2s²2p²

7
14.007
7
7
N
Nitrogen
[He]2s²2p³

8
15.999
8
8
O
Oxygen
[He]2s²2p⁴

9
18.998
9
9
F
Fluorine
[He]2s²2p⁵

10
20.180
10
10
Ne
Neon
[He]2s²2p⁶

11
22.990
11
11
Na
Sodium
[Ne]3s¹

12
24.305
12
12
Mg
Magnesium
[Ne]3s²

13
26.982
13
13
Al
Aluminum
[Ne]3s²3p¹

14
28.086
14
14
Si
Silicon
[Ne]3s²3p²

15
30.974
15
15
P
Phosphorus
[Ne]3s²3p³

19
39.098
19
19
K
Potassium
[Ar]4s¹

20
40.078
20
20
Ca
Calcium
[Ar]4s²

21
44.956
21
21
Sc
Scandium
[Ar]3d¹4s²

22
47.867
22
22
Ti
Titanium
[Ar]3d²4s²

23
50.942
23
23
V
Vanadium
[Ar]3d³4s²

24
51.996
24
24
Cr
Chromium
[Ar]3d⁵4s¹

25
54.938
25
25
Mn
Manganese
[Ar]3d⁵4s²

26
55.845
26
26
Fe
Iron
[Ar]3d⁶4s²

27
58.933
27
27
Co
Cobalt
[Ar]3d⁷4s²

28
58.933
28
28
Ni
Nickel
[Ar]3d⁸4s²

29
63.546
29
29
Cu
Copper
[Ar]3d¹⁰4s¹

30
65.38
30
30
Zn
Zinc
[Ar]3d¹⁰4s²

31
69.723
31
31
Ga
Gallium
[Ar]3d¹⁰4s²4p¹

37
85.468
37
37
Rb
Rubidium
[Kr]5s¹

38
87.62
38
38
Sr
Strontium
[Kr]5s²

39
88.906
39
39
Y
Yttrium
[Kr]4d¹5s²

40
91.224
40
40
Zr
Zirconium
[Kr]4d²5s²

41
92.906
41
41
Nb
Niobium
[Kr]4d⁴5s¹

42
92.906
42
42
Mo
Molybdenum
[Kr]4d⁵5s¹

43
95.94
43
43
Tc
Technetium
[Kr]4d⁵5s²

44
101.07
44
44
Ru
Ruthenium
[Kr]4d⁷5s¹

45
101.07
45
45
Rh
Rhodium
[Kr]4d⁸5s¹

46
106.42
46
46
Pd
Palladium
[Kr]4d¹⁰

47
107.868
47
47
Ag
Silver
[Kr]4d¹⁰5s¹

48
112.414
48
48
Cd
Cadmium
[Kr]4d¹⁰5s²

49
114.818
49
49
In
Indium
[Kr]4d¹⁰5s²5p¹

55
132.905
55
55
Cs
Cesium
[Xe]6s¹

56
137.327
56
56
Ba
Barium
[Xe]6s²

57-71
La-Lu
Lanthanide

72
178.486
72
72
Hf
Hafnium
[Xe]4f¹⁴5d²6s²

73
180.948
73
73
Ta
Tantalum
[Xe]4f¹⁴5d³6s²

74
183.84
74
74
W
Tungsten
[Xe]4f¹⁴5d⁴6s²

75
186.207
75
75
Re
Rhenium
[Xe]4f¹⁴5d⁵6s²

76
186.207
76
76
Os
Osmium
[Xe]4f¹⁴5d⁶6s²

77
190.23
77
77
Ir
Iridium
[Xe]4f¹⁴5d⁷6s²

78
192.22
78
78
Pt
Platinum
[Xe]4f¹⁴5d⁹6s¹

79
196.967
79
79
Au
Gold
[Xe]4f¹⁴5d¹⁰6s¹

80
200.592
80
80
Hg
Mercury
[Xe]4f¹⁴5d¹⁰6s²

81
204.38
81
81
Tl
Thallium
[Xe]4f¹⁴5d¹⁰6s²6p¹

87
223
87
87
Fr
Francium
[Rn]7s¹

88
226
88
88
Ra
Radium
[Rn]7s²

89-103
Ac-Lr
Actinide

104
261
104
104
Rf
Rutherfordium
[Rn]5f¹⁴6d²7s²

105
268
105
105
Db
Dubnium
[Rn]5f¹⁴6d³7s²

106
269
106
106
Sg
Seaborgium
[Rn]5f¹⁴6d⁴7s²

107
270
107
107
Bh
Bohrium
[Rn]5f¹⁴6d⁵7s²

108
277
108
108
Hs
Hassium
[Rn]5f¹⁴6d⁶7s²

109
285
109
109
Mt
Meitnerium
[Rn]5f¹⁴6d⁷7s²

110
289
110
110
Ds
Darmstadtium
[Rn]5f¹⁴6d⁸7s²

111
290
111
111
Rg
Roentgenium
[Rn]5f¹⁴6d⁹7s²

112
285
112
112
Cn
Copernicium
[Rn]5f¹⁴6d¹⁰7s²

113
288
113
113
Nh
Nihonium
[Rn]5f¹⁴6d¹⁰7s²7p¹

119
223
119
119
Fr
Francium
[Rn]7s¹

120
226
120
120
Ra
Radium
[Rn]7s²

121-137
Ac-Lr
Actinide

122
261
122
122
Rf
Rutherfordium
[Rn]5f¹⁴6d²7s²

123
268
123
123
Db
Dubnium
[Rn]5f¹⁴6d³7s²

124
269
124
124
Sg
Seaborgium
[Rn]5f¹⁴6d⁴7s²

125
270
125
125
Bh
Bohrium
[Rn]5f¹⁴6d⁵7s²

126
277
126
126
Hs
Hassium
[Rn]5f¹⁴6d⁶7s²

127
285
127
127
Mt
Meitnerium
[Rn]5f¹⁴6d⁷7s²

128
289
128
128
Ds
Darmstadtium
[Rn]5f¹⁴6d⁸7s²

129
290
129
129
Rg
Roentgenium
[Rn]5f¹⁴6d⁹7s²

130
285
130
130
Cn
Copernicium
[Rn]5f¹⁴6d¹⁰7s²

131
288
131
131
Nh
Nihonium
[Rn]5f¹⁴6d¹⁰7s²7p¹

133
223
133
133
Fr
Francium
[Rn]7s¹

134
226
134
134
Ra
Radium
[Rn]7s²

135-151
Ac-Lr
Actinide

136
261
136
136
Rf
Rutherfordium
[Rn]5f¹⁴6d²7s²

137
268
137
137
Db
Dubnium
[Rn]5f¹⁴6d³7s²

138
269
138
138
Sg
Seaborgium
[Rn]5f¹⁴6d⁴7s²

139
270
139
139
Bh
Bohrium
[Rn]5f¹⁴6d⁵7s²

140
277
140
140
Hs
Hassium
[Rn]5f¹⁴6d⁶7s²

141
285
141
141
Mt
Meitnerium
[Rn]5f¹⁴6d⁷7s²

142
289
142
142
Ds
Darmstadtium
[Rn]5f¹⁴6d⁸7s²

143
290
143
143
Rg
Roentgenium
[Rn]5f¹⁴6d⁹7s²

144
285
144
144
Cn
Copernicium
[Rn]5f¹⁴6d¹⁰7s²

145
288
145
145
Nh
Nihonium
[Rn]5f¹⁴6d¹⁰7s²7p¹

153
223
153
153
Fr
Francium
[Rn]7s¹

154
226
154
154
Ra
Radium
[Rn]7s²

155-171
Ac-Lr
Actinide

156
261
156
156
Rf
Rutherfordium
[Rn]5f¹⁴6d²7s²

157
268
157
157
Db
Dubnium
[Rn]5f¹⁴6d³7s²

158
269
158
158
Sg
Seaborgium
[Rn]5f¹⁴6d⁴7s²

159
270
159
159
Bh
Bohrium
[Rn]5f¹⁴6d⁵7s²

160
277
160
160
Hs
Hassium
[Rn]5f¹⁴6d⁶7s²

161
285
161
161
Mt
Meitnerium
[Rn]5f¹⁴6d⁷7s²

162
289
162
162
Ds
Darmstadtium
[Rn]5f¹⁴6d⁸7s²

163
290
163
163
Rg
Roentgenium
[Rn]5f¹⁴6d⁹7s²

164
285
164
164
Cn
Copernicium
[Rn]5f¹⁴6d¹⁰7s²

165
288
165
165
Nh
Nihonium
[Rn]5f¹⁴6d¹⁰7s²7p¹

173
223
173
173
Fr
Francium
[Rn]7s¹

174
226
174
174
Ra
Radium
[Rn]7s²

175-189
Ac-Lr
Actinide

176
261
176
176
Rf
Rutherfordium
[Rn]5f¹⁴6d²7s²

177
268
177
177
Db
Dubnium
[Rn]5f¹⁴6d³7s²

178
269
178
178
Sg
Seaborgium
[Rn]5f¹⁴6d⁴7s²

179
270
179
179
Bh
Bohrium
[Rn]5f¹⁴6d⁵7s²

180
277
180
180
Hs
Hassium
[Rn]5f¹⁴6d⁶7s²

181
285
181
181
Mt
Meitnerium
[Rn]5f¹⁴6d⁷7s²

182
289
182
182
Ds
Darmstadtium
[Rn]5f¹⁴6d⁸7s²

183
290
183
183
Rg
Roentgenium
[Rn]5f¹⁴6d⁹7s²

184
285
184
184
Cn
Copernicium
[Rn]5f¹⁴6d¹⁰7s²

185
288
185
185
Nh
Nihonium
[Rn]5f¹⁴6d¹⁰7s²7p¹

193
223
193
193
Fr
Francium
[Rn]7s¹

194
226
194
194
Ra
Radium
[Rn]7s²

195-209
Ac-Lr
Actinide

196
261
196
196
Rf
Rutherfordium
[Rn]5f¹⁴6d²7s²

197
268
197
197
Db
Dubnium
[Rn]5f¹⁴6d³7s²

198
269
198
198
Sg
Seaborgium
[Rn]5f¹⁴6d⁴7s²

199
270
199
199
Bh
Bohrium
[Rn]5f¹⁴6d⁵7s²

200
277
200
200
Hs
Hassium
[Rn]5f¹⁴6d⁶7s²

201
285
201
201
Mt
Meitnerium
[Rn]5f¹⁴6d⁷7s²

202
2