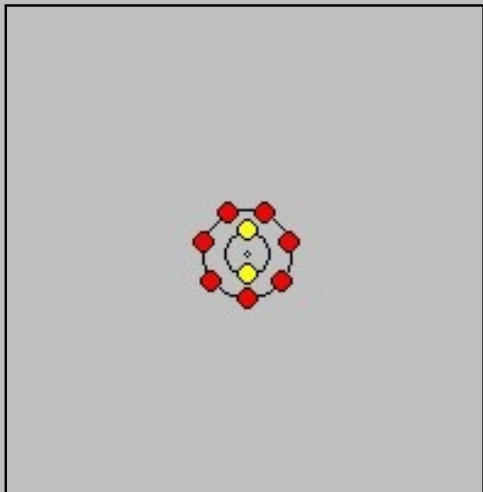


| | | | | | | | |
|-------------------|--------------------|--------------------|-------------------|--------------------|---------------------|---------------------|---------------------|
| F | Cl | Br | I | At | Uus | Uhs | Bus |
| 9 | 17 | 35 | 53 | 85 | 117 | 167 | 217 |

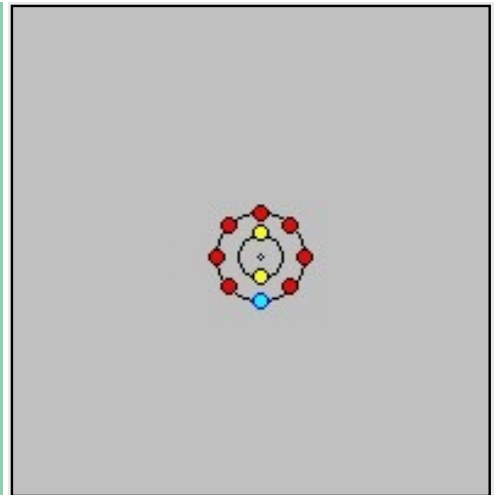
Fluorine



| | |
|---|--------------------------------------|
| Symbol | F |
| Atomic Number | 9 |
| Group | halogens |
| Relative Atomic Mass $^{12}\text{C} = 12.0000$ | 18.9984032 |
| Atomic Radius pm | 64 |
| First Ionisation Energy kJ mol^{-1} | 1681 |
| Ionization energy (eV) | 17,4228 |
| Electronegativity | 3.98 |
| Density kg m^{-3} | 1516 [85 K] 1.696 [273 K] |
| Molar Volume cm^3 | 18.05 [85 K] |
| Thermal Conductivity $\text{W m}^{-1} \text{K}^{-1}$ | 0.0279 [300 K] 0.0248 [273 K] |
| Melting Point K | 53.53 |
| Boiling Point K | 85.01 |
| Number of Isotopes | 7 |
| Inner + outer Shells | 1 + 1 = 2 |
| Inner + outer Orbitals | 2 + 7 = 9 |
| Filling Orbital | 2p ⁵ |
| Ground State Electron Configuration | [He] 2s ² 2p ⁵ |
| Ground State Electron Configuration with free Orbitals (n= 1) | |
| | 0, 1 |



2, 7



Ground State Electron Configuration with compressed Orbitals (n=0)

0, 0



Singularity

$$10 = 2 + 7 + 1 + 0$$

| | s | p | d | f | g | h | i | j |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | | | | | | | |
| 2 | 2 | 5 | 1 | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |

Term Symbol

$^2P_{3/2}$

Discovery

Discovered by H. Moissan (Paris, France) in 1886

Name Derived From

Latin fluere meaning 'to flow'