

Key

Section 4.3

Complete the following assignment in your class notebook with the heading: Electron configurations

Write the electron configuration for each of the following elements and indicate the number of unpaired electrons.

Example: Potassium (atomic #19): $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$; 1 unpaired electron: $\frac{4s}{\ominus}$

1. Calcium (atomic #20)

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$ \oplus no unpaired e^-

2. Lithium (atomic #3)

3. Argon (atomic #18)

$1s^2 2s^2 2p^6 3s^2 3p^6$ $\oplus \oplus \oplus$ no unpaired e^-

4. Iron (atomic #26)

5. Sodium (atomic #11)

$1s^2 2s^2 2p^6 3s^1$ \ominus one unpaired e^-

6. Sulfur (atomic #16)

7. Iodine (atomic #53)

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^5$ $\oplus \oplus \oplus$ one unpaired e^-

8. Dysprosium (atomic #66)

9. Radium (atomic #88)

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2$

$4f^{14} 5d^{10} 6p^6 7s^2$

⊗ NO unpaired

10. Fermium (atomic #100)