

Exercise 3.21 – Atomic radius

Q321-01 Which statement regarding the properties of elements arranged in the Periodic Table is correct?

- A. Atomic sizes decrease going down a Group or Family.
 - B. Atomic sizes increase going from Fr in Group I, to F in Group VII.
 - C. Atomic sizes decrease going from left to right in a Period.
 - D. All atoms in the same Group have the same size.
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Q321-02 In group 1, values of the metallic radii follow the order:

- A. $\text{Li} > \text{Na} > \text{K}$
 - B. $\text{Na} < \text{K} < \text{Rb}$
 - C. $\text{K} > \text{Rb} > \text{Cs}$
 - D. $\text{Cs} < \text{K} < \text{Li}$
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Q321-03 A potassium atom has a larger atomic radius than a sodium atom. Which statement about potassium explains this difference?

- A. It has a larger nuclear charge
 - B. It has a lower electronegativity
 - C. It has more energy levels occupied by electrons
 - D. It has a lower ionisation energy
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Q321-04 Which of the following elements would be expected to have the largest atomic radius?

- A. Li
 - B. Cs
 - C. F
 - D. I
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Q321-05 Which atom has the smallest atomic radius?

- A. ^{19}K
 - B. ^{31}Ga
 - C. ^{35}Br
 - D. ^{37}Rb
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Q321-06 In general, atomic radius decreases according to which of the following patterns?

- A. within a group (family) from low to high atomic number.
 - B. within a period from low to high atomic number.
 - C. with an increase in the shielding of the nuclear charge.
 - D. with an increase in the number of isotopes of an element.
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