

Exercise 3.22 – Ionic radius

Q322-01 Which of the following species is the smallest?

- A. K
 - B. K^+
 - C. Ca
 - D. Ca^{2+}
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Q322-02 Which of the following species is smallest in size?

- A. Cl
 - B. I
 - C. Cl^-
 - D. I^-
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Q322-03 When a metal atom combines with a non-metal atom, the non-metal atom will

- A. lose electrons and decrease in size
 - B. lose electrons and increase in size
 - C. gain electrons and decrease in size
 - D. gain electrons and increase in size
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Q322-04 When the following species are arranged in order of increasing radius, which is the correct order?

- A. Cl^- , Ar, K^+
 - B. K^+ , Ar, Cl^-
 - C. Cl^- , K^+ , Ar
 - D. Ar, Cl^- , K^+
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Q322-05 Which ions are listed in order of decreasing ionic radius (highest first)?

- A. Mg^{2+} , Na^+ , F^- , O^{2-}
 - B. O^{2-} , F^- , Na^+ , Mg^{2+}
 - C. F^- , O^{2-} , Na^+ , Mg^{2+}
 - D. Mg^{2+} , Na^+ , O^{2-} , F^-
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Q322-06 In which pair is the first species larger than the second?

- A. Cl and Cl^-
 - B. Na^+ and Na
 - C. Na and K
 - D. Si and Cl
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Q322-07 When the species Br, Br^- and Br^+ are arranged in order of increasing size (smallest first) what is the correct order?

- A. $Br < Br^+ < Br^-$
 - B. $Br < Br^- < Br^+$
 - C. $Br^+ < Br < Br^-$
 - D. $Br^- < Br < Br^+$
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Q322-08 Which of the following species has the smallest radius?

- A. O
 - B. O^{2-}
 - C. Cl
 - D. Cl^-
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Q322-09 The radii of the species N, N^+ and N^- decrease in the following order:

- A. $N^+ > N > N^-$
 - B. $N^+ > N^- > N$
 - C. $N^- > N > N^+$
 - D. $N > N^+ > N^-$
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Q322-10 In which one of the following pairs of ions is the first ion larger than the second ion?

- A. H^- , Li^+
 - B. H^+ , Li^+
 - C. Mg^{2+} , Na^+
 - D. Cl^- , Br^-
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