

Answer on the question #68066, Chemistry / Physical Chemistry

Question:

a) Write electron configuration for the following ions:

(i) Fe^{3+} (ii) Cr^{3+} (iii) Pb^{2+} (iv) Pb^{4+} (v) O^{2-}

Answer:

Fe^{3+}	$[\text{Ar}] 3s^2 3p^6 3d^5$	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$
Cr^{3+}	$[\text{Ar}] 3s^2 3p^6 3d^3$	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^3$
Pb^{2+}	$[\text{Xe}] 4f^{14} 5d^{10} 6s^2$	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^2 4p^6 4d^{10} 5s^2 5p^6 4f^{14} 5d^{10} 6s^2$
Pb^{4+}	$[\text{Xe}] 4f^{14} 5d^{10}$	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^2 4p^6 4d^{10} 5s^2 5p^6 4f^{14} 5d^{10}$
O^{2-}	$[\text{Ne}]$	$1s^2 2s^2 2p^6$