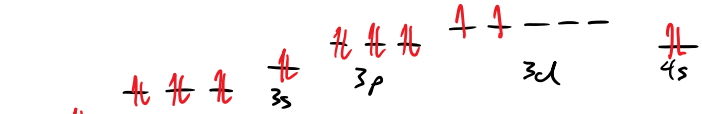
APS110H1f2024 November 8, 2024

November 7, 2024 8:46 AM

Electron/Electronic Configuration

Titanium (Ti) $[Ar]\,4s^2\,3d^2 = Ti^0$



$Cl^0\ [Ne]\,3s^2\,3p^5$

$Cl^-\ [Ne]\,3s^2\,3p^6$

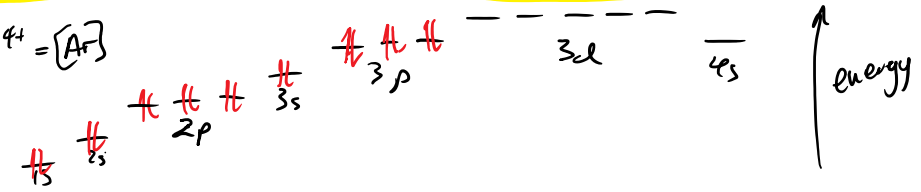
$Ti^{2+} + O^{2-} \rightarrow TiO$

$Ti^{4+} + 2O^{2-} \rightarrow TiO_2$

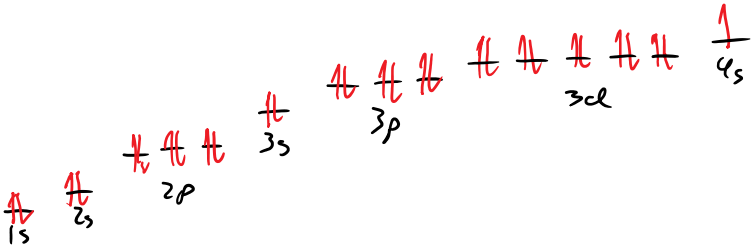
$Ti^{4+} + 4Cl^- \rightarrow TiCl_4$

$TiO_2 + 4HCl\ (gas) \rightleftharpoons TiCl_4 + 2H_2O$

$Ti^{4+} = [Ar]$



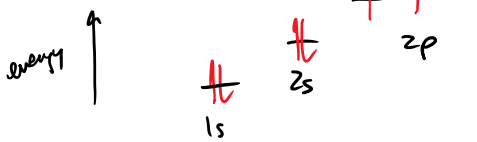
Copper (Cu) $[Ar]\,4s^1\,3d^{10}$



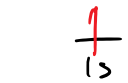
thermodynamic difference.

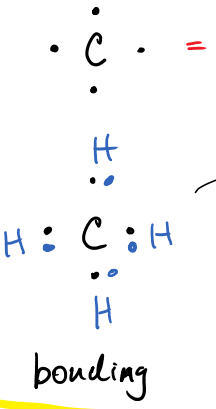
Carbon (C) $[He]2s^2\,2p^2$

$= 1s^2\,2s^2\,2p^2$

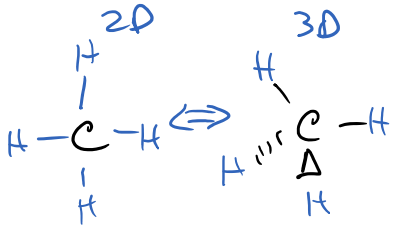


+ Hydrogen $1s^1$ $H\cdot$

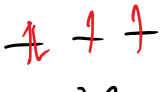




CH_4 methane. (gas)

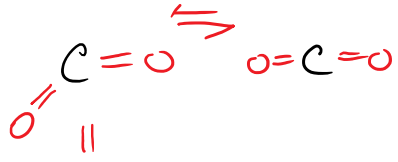


Carbon dioxide CO_2



oxygen $[He]\,2s^2\,2p^4$

equilibrium



Periodic Table - Electron Configuration

November 8, 2024 2:00 PM