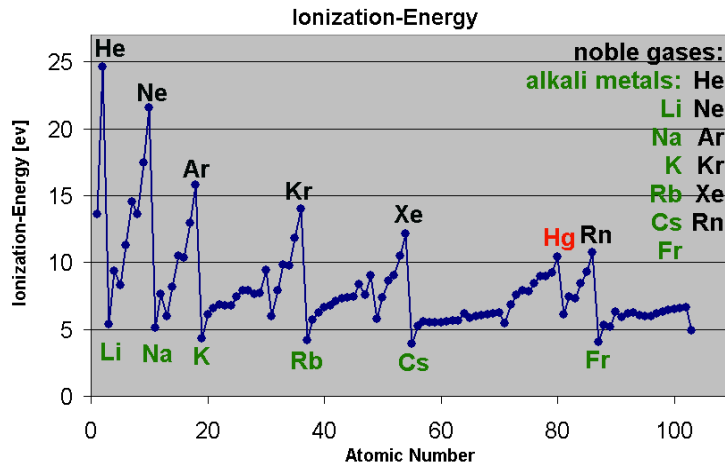


# Ionization Energy

Definition - Energy needed to remove an electron.



Trends - A - Down a column - I.E. decreases  
 B - Across a row - I.E. increases

Reasons - A: More E levels (orbits), electrons are easier to remove if farther from nucleus.

B: Atoms to the right in row have more protons pulling on outer  $e^-$ . (nuclear charge). All outer  $e^-$ 's are in the same E level.

Example - Which has greater I.E. F or C ?  
 Explain.

Answer: F. F has more protons than C + exerts a greater force on its outer electrons. therefore takes more E to remove.

P. 165 #16, 17  
 P. 175 circled  
 P. 174