PES - PhotoElectron Spectroscopy

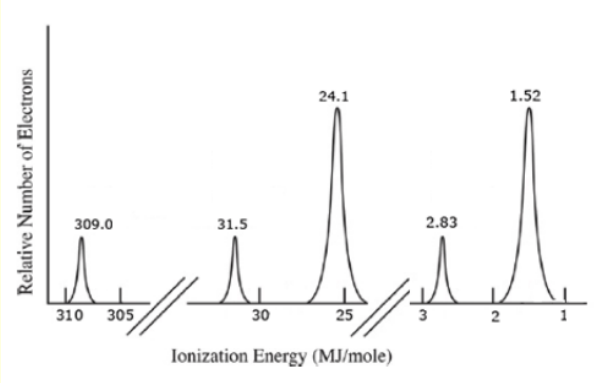
Identifies ionization energy for different electrons in same atom

PES video

Oct 12-1:17 PM

# PES - PhotoElectron Spectroscopy

Label the electron configuration and determine the element




Be able to read graph

y axis: Relative number of electrons
higher peak = more electrons

x axis: Ionization Energy (logrithmic scale)
higher Ionization energy means the electrons are closest to nucleus (highest Coulombic force)

<u>Ionization energy comparisons</u>

-if more protons, (same shell)
higher effective nuclear charge,
higher Ionization Energy

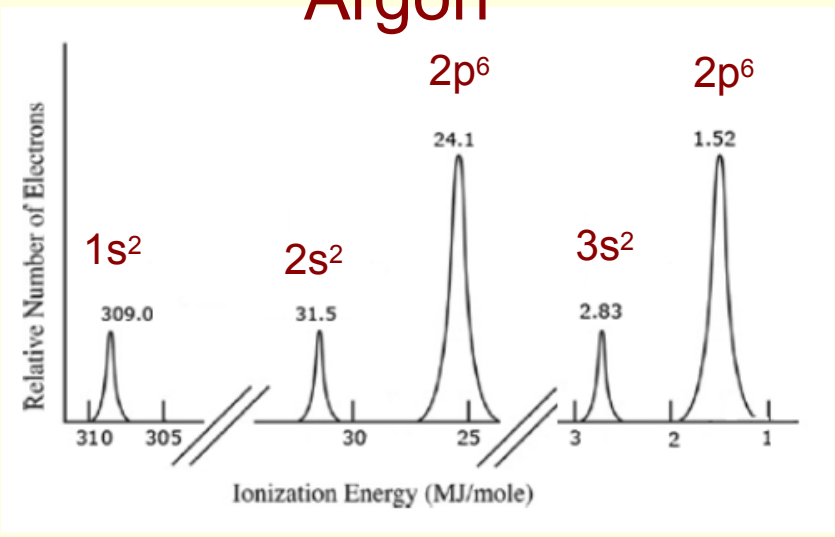
- if isoelectronic (same # of e)
look at effective nuclear charge

Sep 26-6:17 AM

# PES - PhotoElectron Spectroscopy

Label the electron configuration and determine the element

## Argon

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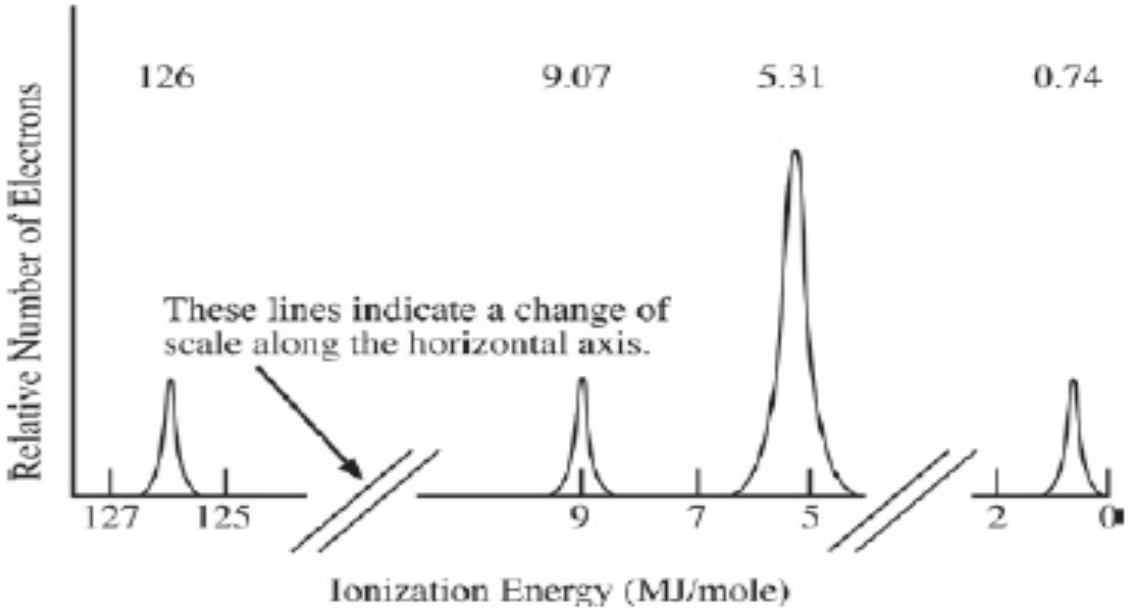
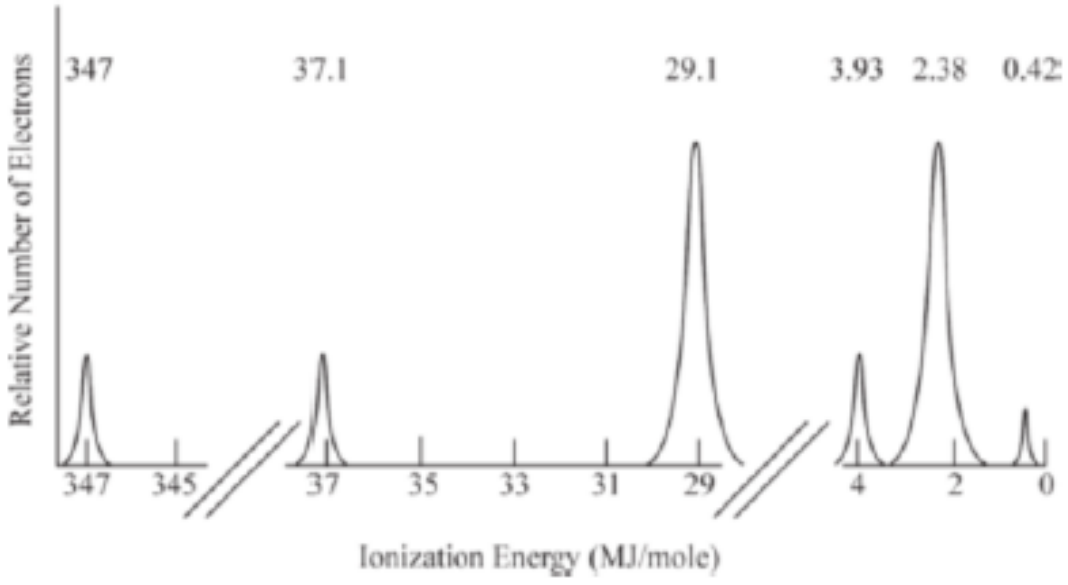

126
9.07
5.31
0.74
Relative Number of Electrons
These lines indicate a change of scale along the horizontal axis.
127
125
9
7
5
2
0
Ionization Energy (MJ/mole)


347
37.1
29.1
3.93
2.38
0.42
Relative Number of Electrons
347
345
37
35
33
31
29
4
2
0
Ionization Energy (MJ/mole)

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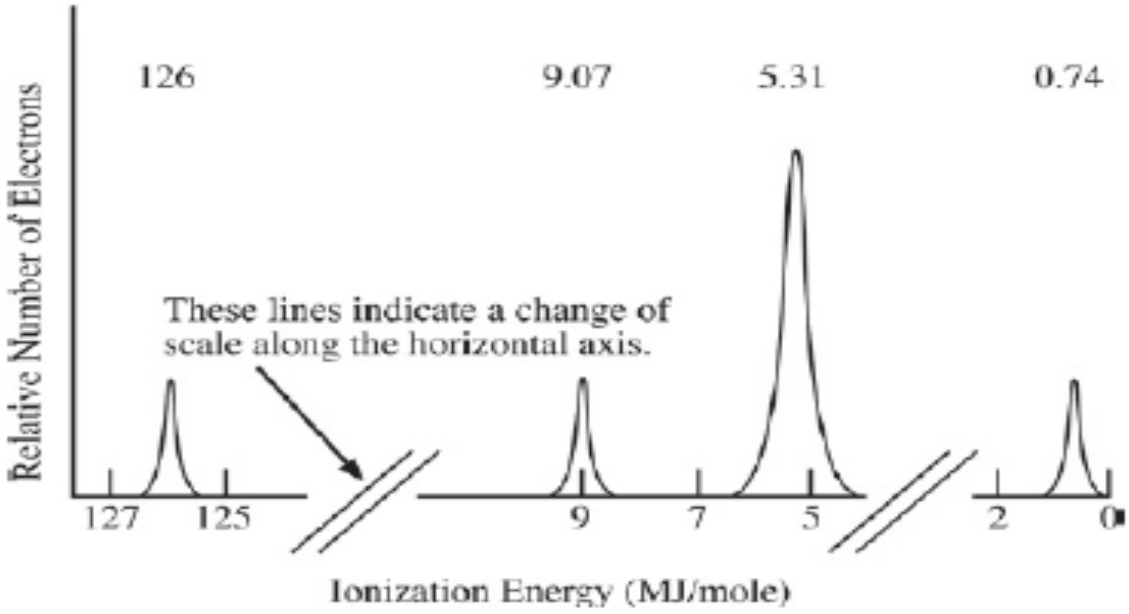
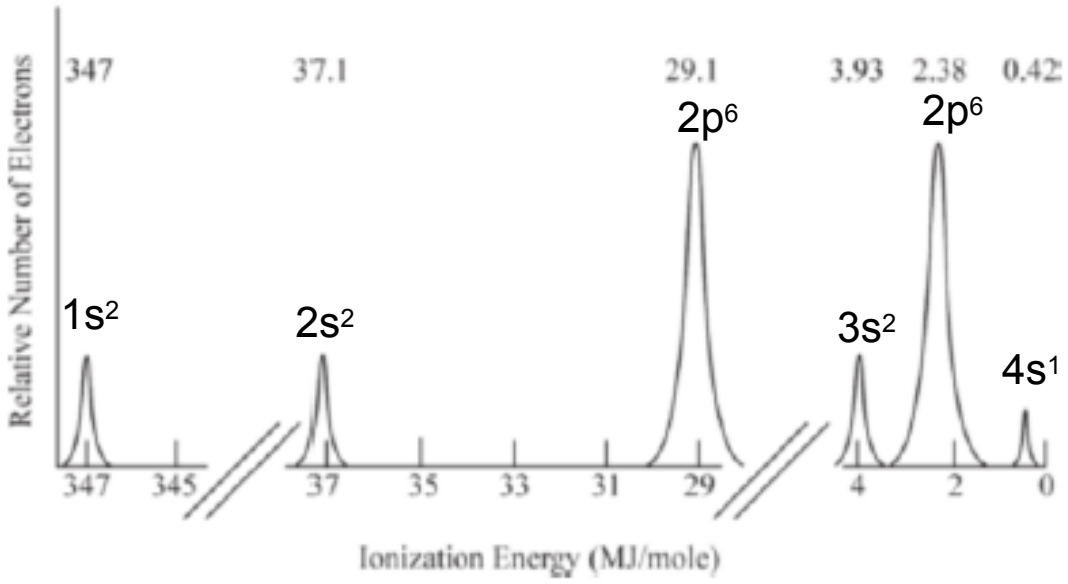



$1s^2$ $2s^2$ $2p^6$ $3s^2$

Mg




potassium K

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## Attachments

watch.webloc