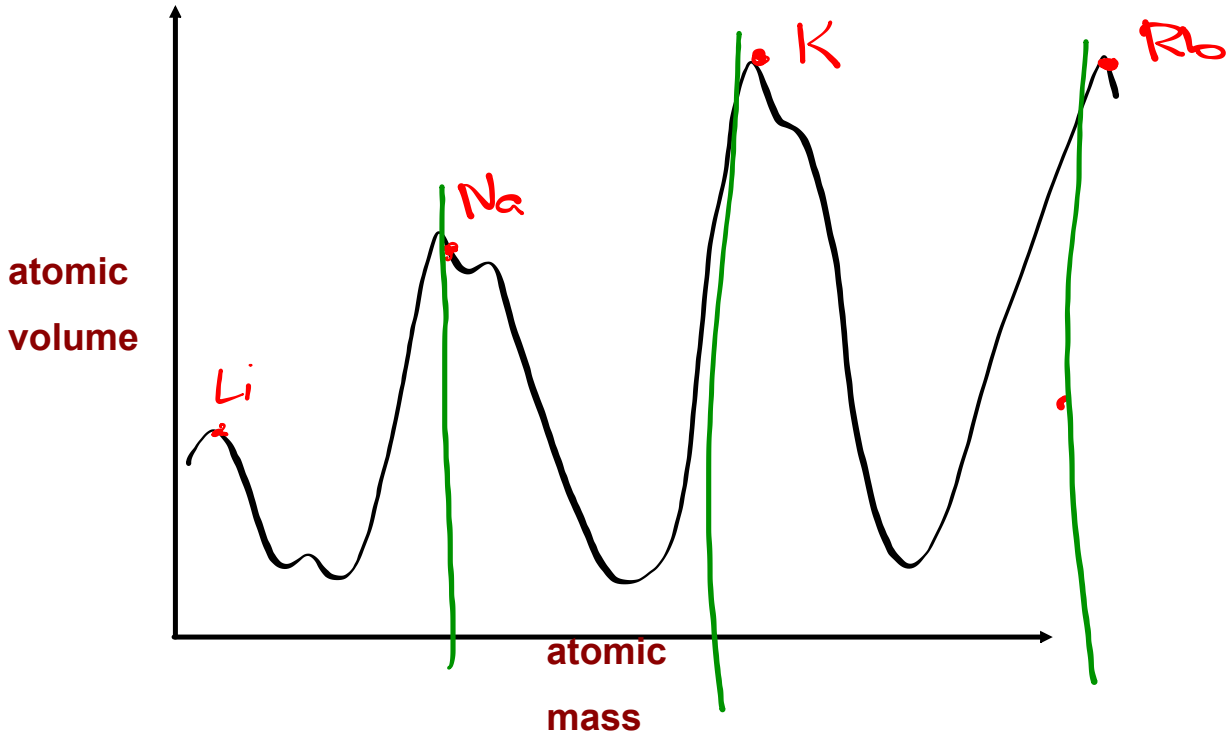
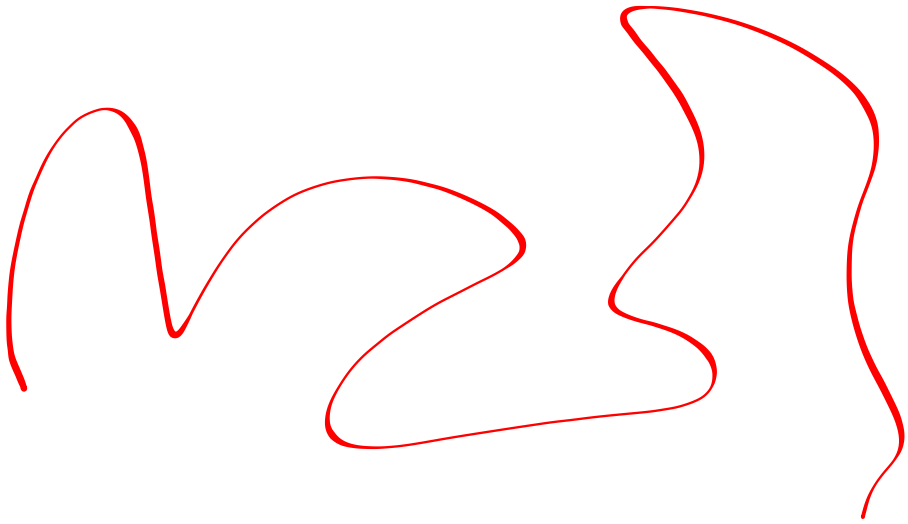
Lab - Discussion


atomic
volume
Li
Na
K
Rb
atomic
mass



Parts of an Atom

Atom - is electrically neutral. # p^+ = # e^-
- is composed of a nucleus containing protons and neutrons, and electrons that surround the nucleus.

Atomic Number - is the number of protons found in the nucleus of an atom. C

Protons - are subatomic particles possessing a positive charge.

Neutrons - are subatomic particles possessing a neutral charge.

Electrons - are subatomic particles possessing a negative charge.
For an atom, the electrons are equal to the atomic number.

Isotope - is a form of an element in which the atoms have the same number of protons as all other forms of that element, but it has a **different number of neutrons and therefore a different atomic mass**

Mass Number - is the sum of the number of protons and neutrons.

Carbon - 6 protons and 6 neutrons has a mass number of 12.

Another isotope of ^{12}C is ^{13}C, which has 6 protons and 7 neutrons.

Isotope Notation:

MAIN SUBATOMIC PARTICLES

Particle	Location	Relative Mass	Charge
proton	nucleus	1 a.m.u.	+
neutron	nucleus	1 a.m.u.	none
electron	outside nucleus	small	-

C => atomic # = 6

$6p^+$

$6e^-$

Subatomic Particle	Location	Charge	Relative Size
Protons	Nucleus	+'ive	1 a.m.u.
Neutrons	Nucleus	neutral	1 a.m.u.
Electrons	Outside Nucleus	-'ive	0 a.m.u. "massless"


C
6
p+
n

Isotopes of Carbon

always has 6

changes

Isotope	p	n
^{8}C	6	2
^{9}C	6	3
^{10}C	6	4
^{11}C	6	5
^{12}C	6	6
^{13}C	6	7
^{14}C	6	8
^{15}C	6	9
^{16}C	6	10
^{17}C	6	11
^{18}C	6	12
^{19}C	6	13
^{20}C	6	14
^{21}C	6	15

most common