

Better Bohr Model Walk Through

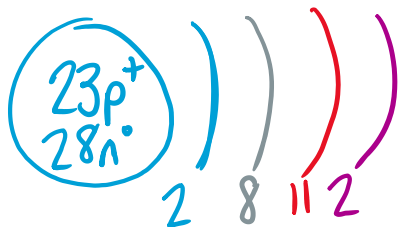
As you know, Bohr was mostly right about the energy levels; however, Schrodinger found that electrons do not fill from the inside out, but instead fill the lowest energy level first. While doing configurations, you've noticed the big numbers are not 100% consistent (i.e. $3p^6 4s^2 3d^{10}$). The big numbers are representative of the energy levels, the letters the orbital, and the small numbers the number of electrons in that orbital. Soooooo.... That means we can draw Bohr style models, but more accurately. I call them "Better" Bohr models. When we talk about Bohr models from now on, we will be referring to these "Better" Bohr models.

Let's do an example together. Let's draw the better Bohr model for Vanadium.

First we'll have to do the full configuration. (Once you get really good at the PT shortcut, you'll be able to do the better Bohr models using the Noble Gas Shortcut)

Within configurations, the Big number are the energy level

V $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^3$



Let's do another example, same idea, with Ruthenium.

Ru $44e^-$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^6$

