

Electron Flame Test Lab

Ryan Coyne

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1. When energy in the form of heat is added to the substances, it excites their electrons to a higher energy level. When the electrons return to the ground state, they release photons of a particular wavelength.
2. A quanta is a discrete amount of a physical property, such as energy, that an entity can have.
3. Wavelength is the distance between a point in one cycle of a wave and an identical point in the next cycle. Frequency is the number of cycles that pass a point per unit of time.
4. The color of light is determined by it's wavelength. The wavelength determines how strongly light interacts with each of three types of cones in our eyes and our brain interprets that as color.
- 5.

	Cu(II)CO ₃	LiCl	CoCl
Color	Green	Red	Orange
Frequency	5.6×10^{14} Hz	4.3×10^{14} Hz	4.9×10^{14} Hz

6.

	Cu(II)CO ₃	LiCl	CoCl
Energy	3.7×10^{-19} J	2.8×10^{-19} J	3.2×10^{-19} J

7. Electrons exhibit properties of particles such as having mass and the ability to collide. They also exhibit properties of waves such as interference and diffraction.
8. Niels Bohr was a Danish physicist born in 1885. He developed a model of the atom that has the electrons revolving in stable orbits around the nucleus at discrete energy levels. Now we know that the electrons do not orbit in stable circular orbits but they do exist at discrete energy levels.
9. The bunsen burner was invented by Robert Bunsen and Peter Desaga. Beaker was Dr. Bunsen's assistant in the Muppets show.
10. My favorite was the CuCO_3 .