

The Conversion of "Radiant Energy" to Electrical Energy is NOT Complex
By Bruce A. Perreault October 28th, 2008

First of all, to understand how we can convert radiant energy into electrical power we must understand that it was a term often used in the early days of nuclear science to describe the energy that is generated from the atomic disintegration of matter to the man or lady on the street. The term 'radiant energy' is a synonym for 'radioactive decay' that T. H. Moray used when describing the energy source that his energy device utilized.

If you have seen those old clock dials glowing in the dark or the glow in the dark stuff made for gun sites or even the exit signs on commercial airplanes, you can begin to understand how radiant energy can be converted to electrical current. It is a simple matter of converting radioactive decay (radiant energy) into electrical energy instead of light as is seen being done by the glow in the dark paints. The old radium clock dials used a radium salt as their source of radioactive matter and a zinc sulfide phosphor compound. The radioactive particles emitted from the decay of a radium salt, such as radium chloride, react with zinc sulfide resulting in the production of visible light energy. Today, a tritium salt replaces the radium salt that was used in early glow in the dark compounds. This is because radium is no longer commercially produced. More efficient, light generating phosphor compounds are now used in glow in the dark paints.

The light emitted from radiation-doped phosphors is used to illuminate semi-conductive materials to generate electrical energy but the efficiency has been very low, typically around 5%. This has been called a direct conversion process which converts atomic energy into an electrical current. However, it is not a "direct" process, contrary to what is stated in text books, because two conversion stages are present, not one, but two, therefore, it is not direct. Strictly speaking, only a one-stage conversion process will convert radioactive decay immediately and therefore directly into electrical energy. If there is a second stage then it is not a direct conversion process.

What really baffles me is that a true direct conversion process is not apparent to learned men and women of science. This tells me that they can only think from what they have read in the textbooks that are fed to them. This is a sad situation that needs to be corrected if we are ever to free ourselves from the grips of the petroleum fuel cartels.

Self-luminous radium paint consisted of a *triboluminescent zinc* sulfide compound, with a minute amount of radium compound added to it. Triboluminescent-zinc generates light energy when energetic alpha particles course their way through this substance, causing friction as they pass through it. To generate electrical current, using the light produced, in conjunction with a solar cell configuration has proven to be highly inefficient because it is not a direct conversion process. Why not mix a small amount of alpha particle emitting radium salt with something like germanium, which emits electrons from the direct contact with alpha particles? Lead sulfide (galena) can also be used with good results. It is just this simple to convert radiant energy (radiation) directly into electrical current.

We can amplify the direct conversion process that I have pointed out by introducing our alpha particles to a light element, such as beryllium. An alpha particle from radium has enough energy to fuse with a beryllium atom. Energy is released in the form of a fast neutron. Impinge this fast neutron on a silver electrode and you have electrons. Provide a copper or graphite electrode opposite to the silver electrode and you have yourself an electrical potential difference between the two electrodes. Attach an electrical load across the electrodes and you have electrical current. How much power can be obtained from this process is beyond the scope of this report. Any offers to provide power calculations are welcome, anyone up to the challenge.

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