

Cold Fusion, And-Or, Atomic Resonance?

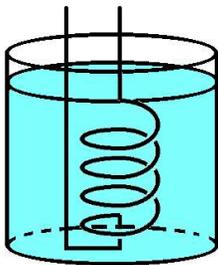
A Theoretical View Of Atomic Energy Reactions In Supposed Cold Fusion

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In an earlier article I sent in response to email ideas from James Fauble interest group at Yahoo. I responded to ideas about using resonance to heat water into steam. Now if you stop to look at this the set up to examine this is somewhat similar to the cold fusion set up. Hence I and no doubt others may wonder about what might have actually occurred in that original test. Herein I will give you something you can experiment with anywhere. All you will have to use is a signal generator which you can download a software version of as freeware from many sources in the ham radio community and if possible download a sweep signal generator. Also download a freeware version of the many oscilloscope softwares. If you have two PC's then you can use the oscilloscope. If you do not then a high impedance F.E.T. analog voltmeter can be used. If you have an oscilloscope of the analog type then you will be set up with a nice signal generator to aid you. Also, you will need to run your audio from the PC to a higher powered audio amplifier so that you can have a good source of audio spectrum energy to use with the set up I will show you herein.

The oscilloscope will serve to test many functions. It can help you not only to check audio voltages but you can also use it to look at the current in your set up. It will serve also to detect any energy spikes in your experiments. Likewise a good mercury or similar thermometer will be required to watch for rises in heat.

The set up is simple and so, only a few illustrations are required to understand this.



Here is a beaker or container of water. The water in this case is a weak colloidal copper solution with an inductance coil added to add in some electromagnetic energy to the equation. The coil may be uninsulated or it may be insulated. You may want to explore both types of this coil. You will use frequencies up to around 20kHz to 100 kHz on the coil. Later you may want to try and use frequencies up around 1 MHz or higher. There are a lot of frequencies to explore and many of the devices to help you to do this can now be found as “freeware” that runs on your PC so you can have some very powerful scientific grade tools in your PC to explore this as far as you want to take it and so, in this exploration many people can get on board the investigation and who knows what may result from this? Many of your tools are free here.

There is no lack of freeware software here for you to search engine for and so you will no doubt enjoy searching and looking at the various signal generator softwares as well as sweep function or sweep signal generators and the numerous oscilloscope softwares. When you do your search just include the word freeware. Look for “signal generator freeware,” “sweep signal generator freeware,” “oscilloscope freeware,” “ham radio freeware.”

{Returning to my previous article to set up this.}

“The idea of using resonance to heat water to make steam is interesting. However to do that we need electronics and electricity and those electronics use energy and have certain losses. Thus, only if the resonant energy can be more efficient at heating the water than directly heating with wood or coal, it will not work as a reliable and inexpensive energy source.

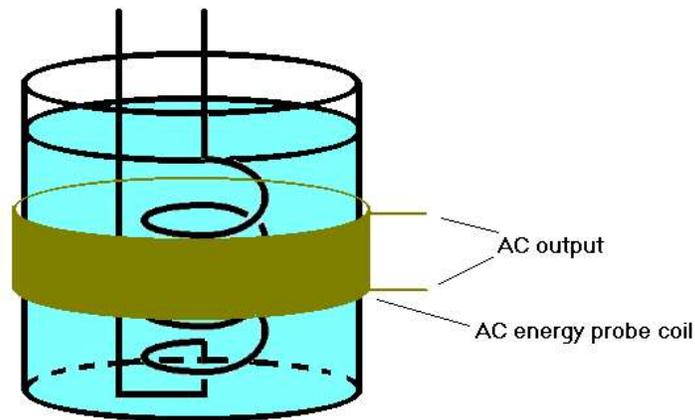
Now if the heating of water however is via the concepts of cold fusion and resonance plays a part in that, then there may be chance of doing this. The ideas of cold fusion need to be combined with the views of resonance and then this may lead somewhere as an idea. I am not expert on cold fusion but something is happening on the atomic level to perhaps change the rate and orbital spin of the electrons and there then is some sort of release of energy from the hydrogen and oxygen nucleus.

If I had to offer a view, I would theorize that when the ordinary orbits of the electrons are altered so that they no longer uniformly circle the nucleus, that windows are left open around the nucleus where energy from the nucleus can leak through. I call this the results of atomically re-arranged electron orbits about the nucleus.

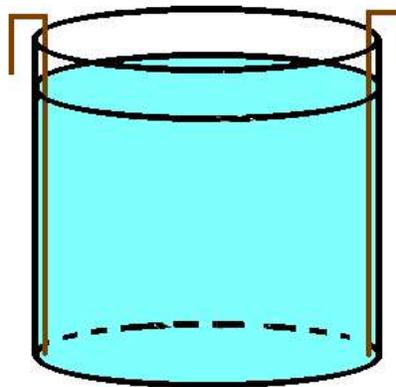
If the orbits of the electrons are uniformly distributed about the nucleus then the energy of the nucleus of the radiant type is counter matched and blocked from being radiated by the nucleus. If the orbits however are made to change and become less uniform and perhaps more closer together leaving certain regions more open than before, then nuclear radiant energy can escape.

Magnetic energy from a coil suspended in the water is perhaps what is used to change the orbits. And in the case of the heavy water, the extra neutrons may help further to offset and alter the orbits when electromagnetic energy is applied. The energy to the coil may be DC or it may be AC and if AC there may be preferred frequencies. Also, if the coil is allowed to also heat the water a little, then there are all sort of energy combinations and scenarios. Also, it might not be all that critical only just that the right kind of people with the same sort of views and understandings need to be brought together.”.....

Now, if any of this is related to cold fusion then the process is not fusion at all but one of a catalyst so to speak that effects the release of energy from the nuclear core. If there is anything to the ideas of resonance then the ideas of how to employ that is simple and so it takes an electronics tech to set that up for you and get you started. Unfortunately, in the world of alternative energy there are alot of theories and talk but little is being look at by techs and littles is being said by actual techs. Anyways I am a tech and so I can get ideas of how to do things or at least get them set up and going on their first legs. Using theories of others or those of my own I have formulated by what I have read of notions on how to perhaps achieve new things.

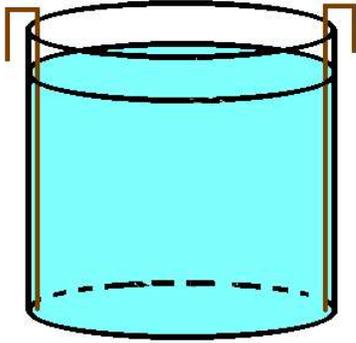


A winding of insulated wire is around the beaker to serve as a means to look for energy spikes of the frequency type which will be detected via an oscilloscope. This then acts as a simple probe. A thermometer of the oral type can be used if you have no such thing as a laboratory thermometer. Electronic thermometer types may be used if you have one.



How to make colloidal copper.

Since we can not afford "heavy water" we will add some "heavy metal" to our water we will use by electroplating copper out into the water. A slight bit of copper will float around in the water by solution and this then makes water known as a colloidal solution. The copper will add extra electrons to the water and this will be like adding energy to the water. The water will then become slightly conductive. It is always advisable to use distilled water so that no other minerals will be in the water and hence effect the water in a way that can not be replicated if something occurs since unknown minerals are in the water. You want to define what can happen with copper in the water.



By placing two copper wires such as that you can obtain from a 1 foot piece of #12 home wiring wire that's been stripped: in the far sides of a beaker as shown and applying 12 volts for about 20 minutes you can get sufficient copper in the water to use in your purposes.

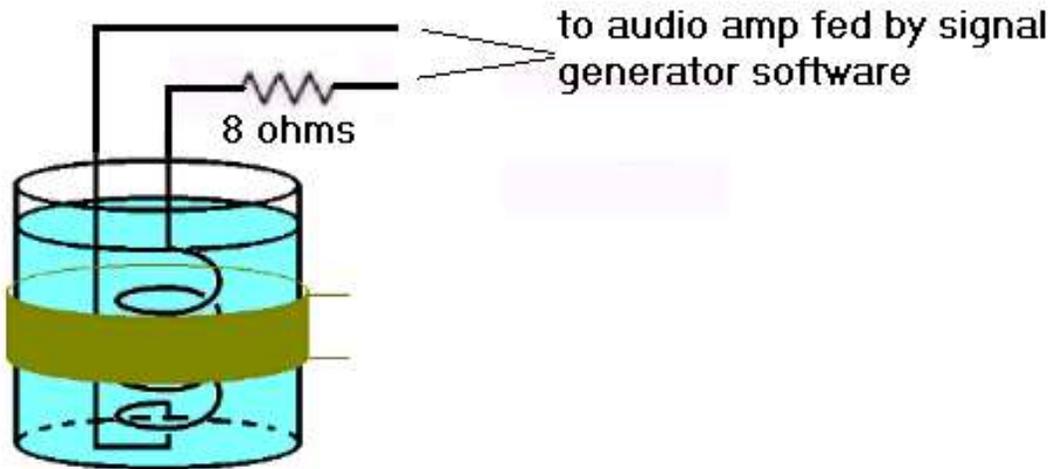
You can calculate the parts per million of copper if you go look up the electroplating formula for use with the copper electrochemical equivalent. You will need a timer and an ampere meter able to read in micro amperes and one milli ampere full scale. (1mA) Caution: unlike colloidal silver, colloidal copper is toxic if ingested! Do not let anyone tell you otherwise, colloidal copper is toxic.

If you wish to merely time the solution making process you can use that length of time as your standard for your solution. If needed that can be replicated that way by anyone to a rough margin and also the average parts per million can later be calculated by someone else should there occur something significant in your experiments. Everything you do must have a standard of comparison and be replicable again. You must learn to keep accurate data and this will aid you in finding things in the data to work with if something happens. The room temperature should always be the same here also. Room temp will not be critical later on since you will learn to be able to note the difference between room temp and a rise in water temp once energy is applied.

Remember then that your preparations are always the same so you can compare data with data based upon standard values. If you change anything then everything else here will be changed. The only values that you will change will be the frequency of applied AC audio band energy. You will study the effect of changes in frequency. Every thing else must be held constant.

To set up the testing apparatus, you will need a 10 watt non inductive 8 ohm resistor and a variable resistor (potentiometer) of 25 ohms both currently available from Radio Shack. Both are used to control the voltage and current through your coil. The potentiometer's center wiper is connected to one of the ends of the potentiometer. {A circuit diagram will follow.} The coil you use must not have a lot of inductance else its impedance will change a lot with every frequency change you make. The resistance can help normalize the current and voltage across the coil if you use a lot of turns in some of your coil designs. You have the option to change coils as you go along and thus try different ideas here. Ok, the potentiometer or variable resistor is connected in series with the coil and if you have an accessory oscilloscope then you may read the voltage across the resistance which will be a AC sine wave since you will be using audio frequency electrical current.

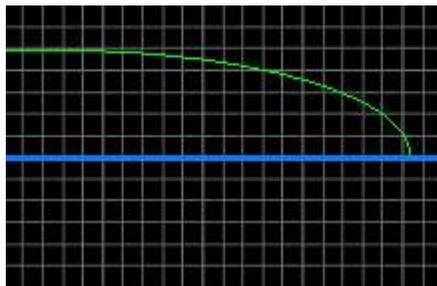
For the most part you will use the 8 ohm resistor which will help you to maintain the proper load to your audio amplifier.



The coil that is situated in the solution is from 10 to 20 turns, you may get up to 30 in some cases. The more turns the better in terms of electromagnetic energy that's added to the water. The 8 ohm resistor is placed in series with the coil and the audio from a 1 to 4 watt audio amplifier is added. It is best to always have the audio equal to one watt at any frequency and this will be realized better with a 4 watt amplifier since at the higher frequencies the output peaks decrease in amplitude in the amplifier. The greater the range of wattage the more control you have. If you lose a lot of gain at higher frequencies then you will want to use all of your levels set at 0.5 watt.

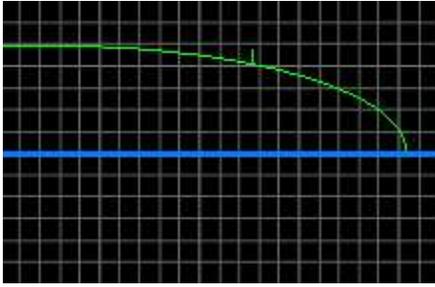
The audio signal to the audio amp comes from either an audio signal generator freeware or an audio sweep generator freeware.

The size of the solution beaker or container is from the 8 oz to 12 oz size and so it does not have to be large. Around 250 ml to 500 L.



This is a typical way in which the audio curve of the output versus frequency will look for most amplifiers. The vertical axis represents the output amplitude and the horizontal axis represents the frequency which increases from left to right. You can use such a graph that plots this way. Without making constant wattage adjustments with each frequency. If a peak in frequency occurs somewhere along the plot it will appear to rise up above the normal curve here and will then be very noticeable.

If you choose to use this type of plot then each point is a representation of voltage on the vertical axis and the frequency of each voltage point is situated by placing each point on its frequency axis. Graph paper will help you and you can generate some graph paper from your printer. You can design the graph paper with a bit map to represent the data you want in the vertical and horizontal directions.



Here you will notice a little spike on the curve. Once you have connected all of your dots to make your curve that you have plotted. If one dot has remained high then draw a line from the plotted curve upwards to the dot and this reveals the spike. If you have a voltage that you graphed higher than the rest, ignore it as you draw the curve by connecting the dots so you will not confuse this with the other plots that make the curve.

As previously mentioned you can do a linear plot and have all of the input voltage levels across the 8 ohm resistor adjusted to the same level and then with an oscilloscope or high impedance voltmeter record the voltage across the coil wound about the beaker. It is actually desirable to compile data in both forms here.

If you do not have an extra oscilloscope or extra computer to run an oscilloscope software on then you will have to use a voltmeter and a sensitive high impedance FET voltmeter is required. If you do not have that then you may use another audio amplifier to amplify the signal from the coil probe wound around the beaker. A good voltmeter of around 20,000 ohms per volt will work to read the output from the other audio amplifier.

If you for instance are using the linear method of plotting then you will have all of the input levels the same at every frequency and then plot the output voltages across the probe coil.

Ok, I think this is enough to get you started and I have given enough insight on the approach to start a study. The rest you can figure out as you go along and you can alter the set up as your findings and realizations dictate.

You will have to turn to what resources as can be found on similar topics and thus gain more insights that way. You should consult physics books. You might want to look up in the physics books the topic about the inertial period of the elements and the periodic chart. The period is an interesting quality of all matter and can lend itself to studies related to mechanical resonance. I can tell you that you never hear about the period of matter being talked about anywheres. Hence it is ripe for a review and perhaps can lead to new things. It however is a very important principle of physics.

Dannie Ray Jackson

see next page for gallery

