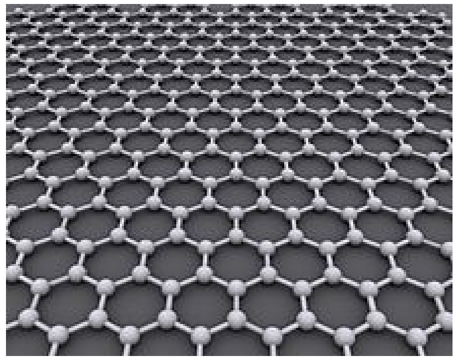
GRAPHENE



by Miles Mathis

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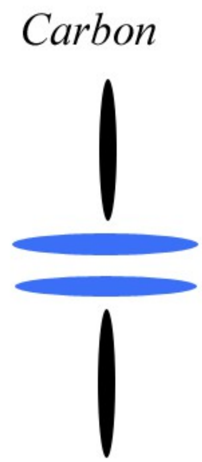
I have been promising to do this one for a while, and now here it is. Those just getting here may want to read my previous papers on Methane and Nuclear Bonding before diving into this problem. My analysis of Graphene will be very similar to my analysis of Methane.

Graphene is known to have three equal bonds out of each Carbon, with a fourth one hanging. These bonds are of course assigned to covalent bonding by the mainstream, but since I have shown electron bonding is all a myth, we know that can't be the correct answer. These molecular bonds aren't caused by electron bonding, but by charge channels created by the nucleus. We have no sharing of electrons, instead having a charge winds of real photons. I diagram these real charge winds as simple male-female sockets or plugs, and these plugs are created by real field potentials: highs and lows, created by variations in charge density.

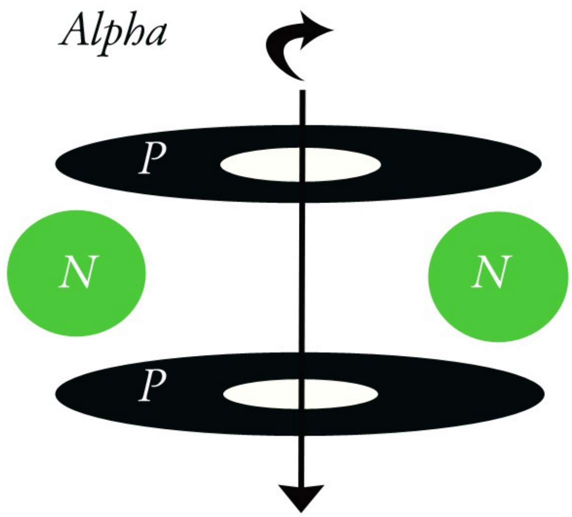
So I already have fewer questions to answer than the mainstream. I have no phonons, no electron bonds, no quasi-particles, no electron holes, and none of that nonsense. But I do have some swells in the sea I have to navigate nonetheless. That is why my readers haven't been able to do this one on their own, I suppose. Even after my papers on Methane and Salt, the answer is not evident at a glance. This is a bit tricky because I have previously diagrammed Carbon as a linear structure, like so:



It looks difficult to explain three or four bonds and a hexagonal structure with that nucleus, doesn't it? Well, we saw a similar problem with Methane, and it wasn't that difficult to solve. We have seen in several previous papers that the atomic nucleus is not as unbreakable as has been thought. Yes, we know it is quite difficult to tear apart, but it turns out it is not as difficult to rearrange the outer nucleons in subtle ways—provided we show a mechanism for it. In many previous papers, we have found we needed to bring a large and more powerful nucleus near a smaller nucleus in order to rearrange its outer nucleons. With Carbon we find a similar thing. In the lab, Graphene can be achieved in various ways. Usually it is shaved or adhesed off of Graphite, but it can also be built up. To build it from Carbon requires growing it on various metals and then transferring it to Silicon Dioxide. It is these metals that cause the Carbon nucleus to be subtly rearranged. We need the powerful charge streams of the metals to break the internal nuclear bonds of Carbon. Actually, we don't "break" the nuclear bonds, we just shove them over so that they can take new shapes, as with Graphene.

This is made possible due to the fact that I have also destroyed the strong force. There is no strong force, the nucleus being held together with charge. Charge channeling through the nucleus creates both the bonds between the protons and neutrons as well as the external bonds we call molecular bonds. Therefore, a stronger applied charge field can rearrange the nucleons, which will thereby rearrange the external bond structure.

Before we get started, let me remind you what my diagram above is telling us. It is telling that Carbon is normally composed of two alphas lined up in the core. That is what the blue disks are representing. Each disk represents two protons and two neutrons, in a little sandwich.



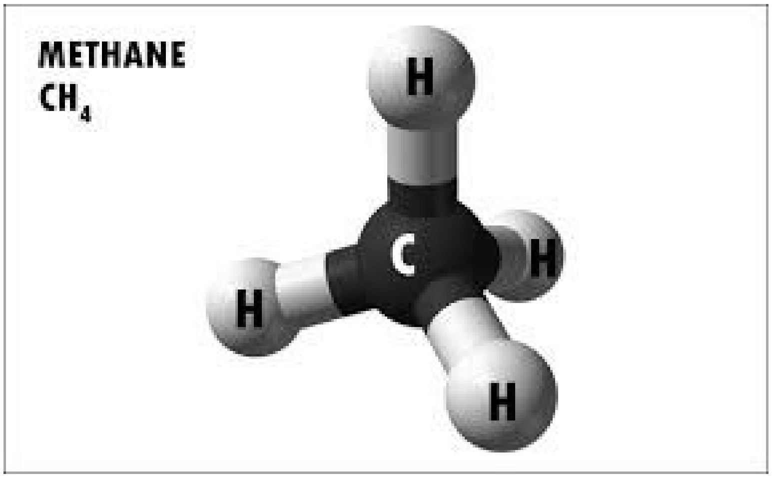
That is what each blue disk represents in the first diagram. The nucleus then is spun up by the ambient charge field, and it channels charge both vertically (along the pole, which I call through charge) and equatorially. The equatorial charge is released by the protons on their own equators like a spinning lawn sprinkler. Since the ambient field is also polar, being made up of both photons and antiphotons, charge moves both up and down. On the Earth, charge is 2/3 photons, so the through charge is greater in one direction than the other. In normal circumstances, charge recycling creates charge minima at both poles, which act to pull in free nucleons (as well as free electrons). All free particles follow the charge stream, and try to go where the charge photons are going. So in the case of Carbon, we will get a proton on each pole, as well as a neutron.

I have shown that in a non-split charge field (no antiphotons), each alpha could pull in two protons worth of charge. So in that case we could put two protons on each pole. However, since the field here on Earth is split, Carbon can't take two protons north and south. But since neutrons are channeling less (see their magnetic moment for the amount), Carbon can take a proton and a neutron on each pole. However, the neutron is plugged in sideways compared to the proton. Meaning, the proton is plugged in with its equator pointing down, as I have diagrammed it above. But the neutron is plugged in with its pole pointing down. This is because protons channel charge pole to equator, while neutrons channel pole to pole. See the link to my paper on quarks and baryon construction for more on that.

Anyway, the weak link in the Carbon nucleus is between the two alphas. The vertical charge streams coming up and down the poles normally tend to tie them together pretty tightly, but if the ambient charge field is tampered with—by bringing a metal close to the Carbon nucleus—that bond between the alphas can be shifted. The charge streams through a metal are much stronger than the charge streams through Carbon, you see, so they overpower the nuclear charge streams of the smaller and weaker nucleus. In the presence of the metal, Carbon will try to match its charge streams to that of the metal, to accommodate the boost. The only way it can do that is to put more nucleons on the poles, aligned vertically. These nucleons aligned vertically act like fans, increasing the charge streams coming in.

So, to make a long story short, one of the alphas in the core will turn 90 degrees to align to the polar charge stream. Ignoring neutrons for now, and sticking to the diagrams above, that will give us one proton in the north pole and three in the south.

If we spread those three lower protons, our new Carbon nucleus now has the same general shape as Methane, doesn't it?



That is why I said this paper would follow that one, roughly. But unlike Methane, Carbon isn't normally stable in that configuration, and if it doesn't do something pretty quickly it will decay into its constituent alphas. That is why we don't see Graphene gas at room temperature. So the first thing that happens is that those three major charge streams exiting the south pole try to disperse some of the pressure through the core by spreading out as much as possible. In other words, they de-linearize. Why? Because if they release the charge into a larger area, the pressure through the pole is lessened. Pressure is determined by resistance, right? Well, if you release charge into a larger area, you have less resistance to that release.

That is why nucleons on the pole don't spread out in normal conditions. The proton and neutron in the original configuration of Carbon didn't spread out. They stayed in line. Why? Because they had *no need* to spread out. The nuclear core could easily handle the charge stream coming through, so no spread was necessary. But here, the single alpha at the Carbon core is now stressed. It is channeling more charge than it was set up to. So it must respond as we are seeing, to release that pressure. We must imagine the nucleons are also spun up, to release more charge along each equator.

Once the nucleons are spun up and the lower protons are spread, the nucleus *still* has too much charge coming through the core, and only one thing will help: adjacent nuclei can bond in order to further disperse the excess charge. And that is what happens. The Carbons bond on those three lower plugs, and the top plug is left hanging. It is the fourth bond here, which they now assign to the π bond. The lower protons are the bonding points because that is where charge is coming *out*. Those are the male plugs in our diagram. The hanging bond at the top is the female bond, where charge is coming in. It bonds later, in Graphite, as we will see below. As more and more Carbons join the chain, those three charge channels spread further and further, until they flatten out completely, creating what they call a 2D structure.

As it turns out, Graphene is weak at first. With less than 6000 atoms, Graphene is very weak, but it becomes the strongest structure known above 24,000 atoms. This confirms my analysis, because at lower numbers, the nuclei will not have dissipated the extra charge pressure caused by the new nuclear structure. But as the structure gets larger, it has more edges where charge can be released. Again, the structure is releasing into a larger area, which lessens the resistance to that release. As the internal pressure on each nucleus subsides, the strength of each bond becomes greater. What nobody has understood up to now is that Graphene in smaller sizes is weak not due to weaker electron bonds, but due to a propensity to decay. The weakness in inside the nucleus itself, and it caused by an unnatural nuclear configuration. Only once the nucleus can dissipate that extra charge does it become stable again.

So why is the bond so strong? Because it is a Carbon-Carbon bond. Carbon would know how to bond to itself, wouldn't it? In other words, the bonds are prematched in charge strength. There is no stepping up or down of charge densities between molecules, so the bonds are perfectly efficient. Beyond that, you have many bonds in a small area, so the bond density of the structure is great. Beyond that, the bond strength isn't determined locally. As we have seen, Graphene acts like one giant molecule, and the charge is shared from edge to edge of the larger structure. In most solids you have charge gaps, but here we have no gaps. Yes, we have holes in the honeycomb, but if we look only at the charge structure, we have no gaps there. Everything is plugged in, with no unplugged releases. No male plugs are releasing into the ambient field.

You will say we have that hanging proton at the top, which must be releasing. Yes, but it is only releasing **anticharge**. If we look at charge only, that is where charge is coming *in*. Charge by itself is uni-directional, so no charge is going out there. That is a negative plug, or a female, not a male.

I hope you see what all this means: if we then add current to Graphene, we have to be adding *anticharge*. Since Graphene created its structure to release charge, it won't like us adding more charge to it. If we added charge, we would break it. So when current is added to Graphene, it has to be current that is upside-down to the current that built it. Since mainstream physicists don't know the difference in most cases, they don't realize this. For them current is current. And, in most cases there is no difference. Photons spinning left almost always act exactly the same as photons spinning right, and it takes complex experiments to see the difference. But the current in Graphene has to be *released* by that hanging proton we are looking at, which means the current we are introducing is moving opposite the current inside the Graphene.

If you think about it you will see that this explains many of the strange properties of Graphene and Graphite.

For a start, we can now explain in a simple mechanical way why that hanging bond of Graphene isn't at 90 degrees to the sheet. At first glance, you would expect it would be, even with my diagram. Although the bond may initially be at 90, once you start releasing charge or current out that proton, the angle won't remain 90. Why? Because of the imbalanced charge field. Remember, the ambient charge field on Earth is 2/3 photons and 1/3 antiphotons. That is the split before any external or man-made field is applied. Since when we add current to Graphene, we are adding current to a pre-existing field moving opposite to it, we are setting up a second split and imbalanced field. We would expect that hanging proton and its companion neutron to release at 90 only in a balanced field. But since the Graphene already has a pre-existing field, the hanging nucleons at the north pole here have to release into that.

Now, every Carbon nucleus, though bound, will be spinning one way and not the other (or parts of it will). That direction of spin is determined by the initial spin configuration of the metal that caused it, which in this case I am calling charge, or plus. That spin configuration will then apply (locally) to the entire Graphene sheet, even parts of the sheet outside the nuclei. Charge is everywhere, not just through the nucleus. Charge is also moving *around* the nucleus, and all that charge will have been made coherent by the metal.

Therefore, what we have is a proton and a neutron adjacent at the north pole of the nucleus, releasing charge into this ambient field. And that field is spun opposite to the proton and neutron. Not only are they releasing anticharge into a charge wind, which will tamp it down, they are releasing into a charge wind that is tamping down their own greater spin. Yes, the proton and the neutron are also spinning. Problem is, the proton and neutron won't *respond* to this strange situation in the same way. Since they have different magnetic moments, they aren't spinning the same or releasing the same amount of charge. Also remember that the neutron and proton are plugged in 90 degrees to one another. So in effect we are backflushing the proton and neutron with the same current, but they are releasing this current into an opposite field—a field they respond to differently. This differing response will cause them to move apart, taking different angles to the field. Since the proton still determines the main line of current, that is the current we will measure. But I predict a secondary line of current here, released by the neutron. It may rejoin the current released by the proton, but close to the nucleus, there should be two anticharge streams at the north pole.

This greater analysis also explains the magnetism of Graphene under an applied current. Since the applied current is opposite to the charge direction of the Graphene itself, we would expect a tamping down of the E field and a spinning up of the B field. See my paper on Period 4 and my analysis of Iron for more on this. In short, when charge or anticharge predominates, you get an increase in E. Electrical current is through charge in one direction. But when you have *both* charge and anticharge in nearly equal amounts, one spins up the other, and you have an increase in magnetism at the atomic level.

This also explains the spontaneous n-doping of Graphene on soda-lime glass. Depending on the stability of the Graphene, it can take charge from either direction, but as we have seen it prefers anti-charge. Charge is what built it so charge is what will soon break it, applied with too much strength. But the hanging bond at the north pole allows for an easy application of anticharge. Anticharge would be a danger to Graphene only if it were so strong it completely overwhelmed the main charge lines.

There is another thing here that I saw very early on in my analysis, something you may have already picked up on. When we initially spread those lower three protons, I left out what happened to the neutrons down there. They are no longer in the alpha sandwich, so what happened to them? We may assume they plugged into that southern charge stream in some way, but they can't now be bound like they were before. Even if we assume the Graphene uses them to dissipate some of its extra charge, they can't be strong parts of the architecture here—not in the way they were before. In other papers, we have seen the neutrons are an integral part of the alpha, and are actually aligned opposite to one another. In other words, anti-parallel, one neutron channeling up and the other down. So when the alpha turned and split, one of the neutrons may have flipped, enabling it to release charge like the other one. But as fourth and fifth nucleons plugged into that southern pole, they can't be very vital, can they? And as the Graphene gains strength, they must become less vital, not more. That would lead me to predict that Graphene should be a good source of neutrons, supposing you have some method to knock them out of there. They wouldn't be "free", but they should be more weakly bound than most neutrons. So I did a quick search on that, and guess what I found? I found the page at Wikipedia entitled "Nuclear Graphite". There we learn that Graphite has been used in reactors from the beginning. Graphite and heavy water are the two most effective "neutron moderators". What is a neutron moderator? It is a substance that is able to reduce the speed of fast neutrons, turning them into thermal neutrons. How does that happen, exactly? Apparently, it is not exactly known, but they think the neutrons are just being slowed by "bouncing". My analysis would imply that with Graphite, this is not what is happening. Since heavy water is also a source of weakly bound neutrons in my theory, it looks to me like neutrons aren't so much being slowed as *exchanged*. The free neutrons in the reactor are colliding with the neutrons in Graphite, and both are knocked free. Since one was stationary, each is now going half the speed the initial one was going. One is re-absorbed by the Graphite, filling that hole, and the other goes on. So we have a halved speed on the free neutrons. This is strong indication I am right, since other forms of Carbon besides Graphite don't have this quality. They don't have it because their neutrons on the south pole are not as weakly bound.

You will tell me we should have three neutrons down there, not two. Carbon originally had six, two are in the remaining alpha and one is on the north pole. So what happened to the 6^{th}—the one that was originally plugged in with the proton on the south pole? Well, I have an answer for that as well, but first we have to do some math. We have to study the given numbers for bond length and interplanar spacing of Graphite. The first number is .142 nm, and the second is .335. So the spacing is **2.36** times the bond length. Since the bond length is determined by the charge field and the spacing is determined by the anticharge field, we would have expected the number 2 to the first approximation. Bond length is a direct function of charge strength, and there is twice as much charge as anticharge on the Earth. However, that is not the only factor here. In Graphite, that previously hanging bond on the north pole has to be plugging in somewhere in the south pole of another carbon in the sheet above, and the only place it can do that is inline with those two loosely bound neutrons that came out of the alpha. Since the magnetic moment of the proton is 1.36 times that of the neutron, we can do the simple math. We need to find a reduction of 18% to explain the given numbers. Since 18 is half of 36 and we have two neutrons involved in the bond, the math pretty much does itself. Obviously, the neutrons create a weaker bond with that north pole proton than would otherwise be created. One neutron would create a bond 36% weaker, due to magnetic moment differences. Two neutrons create a bond 18% weaker, which tells us how the field works mechanically. Two neutrons don't create a bond 47% stronger (.735 x 2), since they aren't arrayed in a line. They split the charge channeling, so that two neutrons only halve the loss of one neutron.

But those numbers tell us our 6^{th} neutron isn't involved in that bond. The third neutron at the south pole doesn't join those two from the split alpha. It must stay with its original proton, so it is located on one of the three lower bonds. This must mean that one of those three bonds is slightly different than the other two. This may be what causes the humps we see in the Graphene sheet. It isn't the hanging bond causing that, as some have thought, it is the 6^{th} neutron. Also, this 6^{th} neutron is now the least bound in the architecture, so *it* is the one that is probably taking part in neutron moderation in reactors. With Graphene, any one of those three southern neutrons would be candidates, but with Graphite, the 6^{th} neutron is by far the best candidate.

Conveniently, this explains why Graphene made from pure Carbon-12 has a much higher thermal conductivity than normal Graphene—which has about 1% of Carbon-13. According to current theory, there is no easy way to explain that, but with my diagrams, there is. As we can see, the 7^{th} neutron of Carbon-13 has to go on one pole or another, in what I call a valence position (since this is where the valence electrons are located). There is no room for it in the north pole, so it can only go to the south pole. There, it can position itself in the exiting charge stream, helping somewhat to pull charge through and out. You would think this would help conduction, and with linear Carbon it sometimes does. But in Graphene it is just another bit of excess architecture. Once the three protons splay out, the 7^{th} neutron must join the two freed from the alpha, and like them it can only act as a potential leak. It might become useful in the link up in Graphite, but in Graphene it can only spew charge into the field. In fact, in now appears that the 5^{th} neutron flips to match the 4^{th} only when creating Graphite. In that case, it is needed for the bond. But in Graphene, nothing is being bonded on the south pole, so the 4^{th}

and 5th neutrons probably remain anti-parallel—precisely to *prevent* charge loss in that direction. But if they are joined by this 7th neutron, there is no way to make them all anti-parallel to one another. One of them must remain unpaired, and that unpaired one will begin drawing charge out the south pole. In other words, a leak has sprung in our architecture. You might just think it would cause a 1% drop in thermal conductivity, but because it is positioned at the all-important pole, it does more damage than that. Charge has to take a sharp turn to follow any of the three proton legs, but it can exit through that unpaired neutron with no turn at all. That is why Carbon-13 is deadly to thermal conductivity in Graphene.

We are told that electrons propagating through Graphene lose their mass, becoming quasi-particles, but that is absurd. What really happens is that the electrons are spin-stripped by the material, becoming photons. The reason they have to be described currently by the 2D Dirac equation rather than the Schrodinger equation is that the Schrodinger equation is faulty, especially regarding spin ½ particles. Since the whole theory behind spin ½ is also faulty, we see where the mess came from. But why would Graphene spin-strip an electron down to a real photon? Again because the applied current is moving opposite to the internal current of Graphene. Charge can move both directions here, but electrons can't. The electrons they are talking about are electrons that came in with the *applied* current, so they are moving with what we are calling the anticharge here. We will say they are spinning **right**. But the internal charge profile of the Graphene, as created by the metal, is charge, or **left** spinning. Therefore, when the introduced electron hits the field of the Graphene, it will be spun down. If its outer spin is spun down completely, this is the same as a spin-strip. That spin is gone. An electron that loses its outer spin becomes a photon. Therefore, under the right circumstances, we should see Graphene "producing" X-rays. And guess what, it does. At that link to phys.org, we are told that electrons moving through Graphene plasmons cause them to release X-rays. But the electrons aren't releasing X-rays, they are *becoming* X-rays. That would be pretty easy to prove, since they now have electron counters. All they have to do is count electrons. They will find that the X-ray production leads to an electron reduction.

Now, why would Graphene be inert when completely flat, but conduct well when deformities are introduced? Simply because if you spread those three lower bonds out completely, matching them to the equator of the nucleus, you will have short-circuited the charge channeling of the atom. Charge channeling is normally *either* pole to equator, or pole to pole. But each profile has its own mechanics. Pole-to-pole channeling is through-charge, is linear, and it relies on field differentials top to bottom. It relies on a north/south pull, or a charge density differential top to bottom. Pole-to-equator channeling relies on the spin of the nucleus and its roughly spherical shape. During spin, the equator has more angular momentum, which draws charge out that way via a centrifugal effect. But here, we have a sort of mixed situation, where a polar charge stream is then spread out at 90 degrees angles. It comes in a pole, vertically, and then is released horizontally. That can't work because there is no logical mechanics for it. The charge density variations top to bottom don't apply, since—technically—there is no south pole any longer. Yes, we can still plug in neutrons down there, as I showed above, but for the three protons, the south pole no longer exists. They are releasing horizontally or equatorially, so there is no pull from a south pole. The pull to the side of the atom simply doesn't exist in the same way. There aren't lower charge densities out there, so there is no "pull". And, in the same way, there is no centrifugal effect to work with. Although there is no real south pole for these three protons, they are still plugged into the nuclear axis. They are getting their charge stream from the spin axis, so that charge stream can't feel any centrifugal effect. During spin, a sphere feels no centrifugal effect from the center or from any point on the spin axis.

In short, you can't have a mixed charge profile, one that is half polar and half equatorial. The nucleus has to channel one way or the other, because the mechanics only allows the two choices. The nucleus in that case becomes inert.

Some will say, "Then why doesn't the nucleus dissolve in that case? If no charge is running through it, what is holding it together?" Three things. One, we still have gravity, which the mainstream has mismeasured at the quantum level by 10^{22}. Two, we still have charge surrounding the nucleus like a powerful atmosphere. It supplies an external pressure. Three, I assume that although the main charge streams have been broken, other minor ones persist. For instance, if we break that main line of charge, the nucleus can still channel through those neutrons on the south pole. So if we went to 90 degrees and applied a current in the right way (from the south pole), we could force some amount of anticharge through the Graphene. The Graphene won't be completely inert, it just won't like our original current plugged in from the side.

On the way out, I wan't to remind my readers that Geim and Novoselov won the Nobel Quasi-Prize in quasi-physics in 2010 for their work on Graphene, allegedly showing the anomalous Quantum Hall Effect and supposedly proving the existence of Berry's phase of massless Dirac fermions. However, they did nothing of the sort. There is no such thing as massless fermions, Dirac or otherwise. No particles are massless, not even photons. What they were seeing is photons, not Dirac fermions. In the same way, the Quantum Hall Effect is another jumble of misdefined fields and fudged maths, which has spun out of decades of confused theories. Therefore, most of what you hear about Graphene is mist. It simply isn't to be trusted. Just look at this photo which I found on the page for Graphene:

That is a scotch tape dispenser with Andre Geim's name on the side, a hunk of Graphite, and a transistor. It is now in the Nobel Museum in Stockholm. So the Nobel Museum is now an analogue of the Museum of Modern Art in New York, where they exhibit Swatch watches, ballpens, and piles of rocks. It is also an analogue of the Newseum in Washington, DC. In other words, it is a museum of propaganda and mystification, created to stir your brain. [In this line, some may be interested to know that Geim's mother is a Bayer.] Geim was allegedly able to pull a single layer of Graphene off of Graphite with tape, although we aren't told how he was able to get it off the tape.

So, as usual, we see fake physics being sold as real physics, and fake physicists being sold as real physicists.

Since I am apparently the only one in the world who can intuit or deduce what is actually going on at the quantum and molecular level, and who can properly read all the new experiments, isn't it strange that no one seems to care? Actually, it is just the way the world works now. Physics, like art, isn't for people who can actually accomplish things. It is for the children of the wealthiest families, who believe it is their right to be famous for doing nothing. It apparently doesn't bother them to be feted for things they know are fake. Remember, we have seen exactly the same thing at the "highest" levels of art, where rich and famous “artists” have won top prizes for things like dressing in a bear costume, turning lights on and off, or putting their bed in the museum.* The Nobel Museum isn't quite there yet, but it is moving ever more quickly in that direction.

*Curiously, *all* of these famous artists are closely related to the famous scientists. Just a coincidence, right?