

Re: My New Website

Source: <http://sci.tech-archive.net/Archive/sci.physics/2004-06/7940.html>

From: Lothar Brendel (*l.no.spam.brendel_at_uni-duisburg.de*)

Date: 06/24/04

Date: Thu, 24 Jun 2004 21:34:32 +0200

Y.Porat wrote:

> *Lothar Brendel <l.no.spam.brendel@uni-duisburg.de> wrote in message news:<cbc4s2\$50t\$1@a1-hrz.uni-duisburg.de>...*

>

>>*Y.Porat wrote:*

>>

>>>*Lothar Brendel <l.no.spam.brendel@uni-duisburg.de> wrote in message news:<cba84o\$nje\$1@a1-hrz.uni-duisburg.de>...*

>>>

>>>

>>>>*Y.Porat wrote:*

>>>>

>>>>*[...]*

>>>>

>>>>

>>>>

>>>>>*so please Bjoern and Lothar*

>>>>>*try to undrstyand my folowing claimes and explanation.*

>>>>>*th4 bottom lne of it is :*

>>>>>*all those diffrent distances between atoms can be explained*

>>>>>*with *just one electron bond length*!!*

>>>>

>>>>*Of 1.9Å, right?*

>>>

>>>-----

>>>*actually i would not bet that this is the 'last' acurate result*

>>>*because i myself got different results from different analysis*

>>

>>*For a scientist, getting different results for the same quantity means*

>>*that his/her theory is _wrong_.*

>

>-----

> *i am still not Gods friend at least not as close to him as you*

> *are (;-)*

What has God got to do with the fact that you violate the basic scientific approach?

sci.physics: Re: My New Website

>>>of something more than 2 A as well so it is just my first 'tials'
>>>'shots in some cloudy aire' i dont know the nice English term for it
>>>may be 'groping'?
>>
>>"Tapping in the dark"?
>
> yess thats th e way to do pioneering scince and not to be just
> a parrot....

Yeah, you are doing the pioneering work to invent fire in your pitch black room into which you locked yourself, while outside there is the sun and electric light as well.

>>>>So how do you explain e.g. copper with a nearest neighbor (NN) distance
>>>>of 2.55Å?
>>>
>>>see my explanation to Bjorn about the double and tripple bonds
>>>of Carbon
>>
>>That was incomprehensible.
>
> because now *you are too lazty * to make youself a simple
> irin model of two tetraheders

No, you were (and still are) too lazy to explain your ideas comprehensible (as you admit below).

> it not lazy take two iron wires entangle them at their middle,
> spread the rest edges to the 4 directions and you have
> thje carbon model

That resembles the carbon in its sp^3 hybridized state (in the language of chemistry).

> than make another on
> now approach tem together so that only two legs will touch
> see the distance between the centroids
> now go on and approach 3 'legs'from each tetraheder to
> touch
> you will see the centroids coming even close

Yepp, that's still clear, though without any physical basis, but let's go on.

> now the point is that you can do it not only
> qualitatively
> you can do it *quantitatively*

Yes, it's trivial geometry, the "centroids" e.g. have a distance of $2/3$ of the arm length.

- > *as i guess in our modern situation you can do it by a computer*
- > *program (say autocad)*
- > *i diod it the primitive way of hand calculation*

For the calculation, the math one learns in school is sufficient. But for the visualization, surely a computer helps.

- > *but the poit is that there is nothing like doing it with your*
- > *own fingers– it gets enshrined in memory the strongest way.*
- > *(3d memory)*

Here I agree, playing with a "molecule building set" helps a lot when dealing with crystallography.

- > *so you will get that if you take a ;legs length for say*
- > *2 Å*
- > *you wilol get the distance between the centroids*
- > *in the 'double bond' as 1.5 Å*

Wrong, it's $2/\sqrt{3} * 2\text{Å} = 2.3\text{Å}$.

- > *and the tripple bond (while 3 legs are touching)*
- > *as something like 1.42 Å*

Wrong, it's $2/3 * 2\text{Å} = 1.33\text{Å}$.

- > *no need for quantum mechanics and no smantum one*
- > *just simple 3d stereometry.*

Of course not. QM deals with physics, but that above is merley a geometrical construction made up by you without any foundations in physics.

- > *btw you are right by your later remark that*
- > *the distance between atoms is on the shortest line*

Sure, it's the definition.

- > *you should guess my mind that i was mwaning to say*

No, I should not. You should think before writing.

- > *is that the real connection of them is *mostly**
- > *not on that line but sideways– so a longer way than*
- > *the shortest line*
- > *except of course in cases that there is*
- > *only a one 'valence' elecrtion bond like that of say water.*
- > *or others with valence one.*

So such "single bonds" are always 4Å ?

- > *even then my findings are that the real connection point*
- > *is not exactly on the shortest line*
- > *there is always a 'break in angle' ie not 180 deg*
- > *if you 'go all along the *real* connection line'*
- > *i have even an explanation to it:*
- > *if it were a real straight line the electrons*
- > *from the two atoms would collide at the connection point*
- > *and 'send to hell' each other.*

Yeah, sure...

And did you find any experimental evidence for this electron hell-sending process?

[...]

- >>>*it is done sideways*
- >>>*imagine metaphorically two spiders catching each's legs*
- >>>*(or two crabs*
- >>>*the 'legs' are spread longer sideways than the direct line between*
- >>>*themselves*
- >>
- >>*Err, where do you place the atoms in this picture? Only on the spiders*
- >>*bodies or also on their "hands"?*
- >
- > *actually the atoms are defined as 'the spider *and * their 'legs'*
- > *but the distance is as you stated- between the nuclei.*

So, there is only one nucleus on the spiders body, I see.

That means, we do not even agree about the tetrahedrons in diamond.
Could you now explain, how you arrange your spiders to form the diamond lattice?

[...]

- >>>*and if not complicated enough sometimes it is two electrons*
- >>>*one from each side that do the connection*
- >>>*and sometimes only one is contributing electrons (the other-*
- >>>*lost it during bonding*
- >>>*so it is not as simple as to phrase it in one simple elegant*
- >>>*single law sure not one mathematical formula (at least not at this*
- >>>*stage of knowledge).*
- >>
- >>*Not with _your_ state of knowledge. As I already explained, nowadays the*
- >>*geometric and electronic properties of crystals can be _calculated_,*
- >>*starting from quantum mechanics, without plugging in any distance.*
- >
- > -----
- > *calculated!! it seems like too much hand waving*

QM calculations are just the oposite of hand waving.

- > *i didnt see the absolute success of qm even to describe*
- > *and calculate all the elements of the periodic table*
- > *it seems that you are not exactly 'in' those problems*
- > *qm didnt go further than the irom element*

It's you who is way "out" of these problems. Just how old are your references? People are doing fully relativistic calculations on funny stuff like Uranium hexaflouride and it works, cf. e.g. J. Chem. Phys. 104, 1012 (1996).

- > *and the excuse for it is 'not enough 'claculation pwer'*
- > *to our enem super computers.*

So what (if it were true)? That wouldn't mean that the method was wrong, but demanding.

- > *you are not aware about the over self estimation of qm.*
- > *iow not aware about how much *not achieved* by qm.*

You have no clue about the principles and the achievements of QM. As usual: What you don't understand can only be wrong.

- > *thos epeole are asertive pompous people who know how to sell*
- > *themselves in a much higher price than theyt realy worth.*
- > *(not completely clean from crookism!!)*

Look who's talking. You don't even get diamond's density correctly from your model.

- >>>>*Sure, for crystals with a NN distance < 1.9Å, you can always fudge the*
- >>>>*result by "buckling" this "arms".*
- >>>
- >>>*it is not exactly buckling it is sometimes different amgles*
- >>
- >>*Buckling is actually possible with different angles.*
- >
- > *yess but we what to understand it more tangible'*
- > *more physically and less only mathematically.*

What's the point? In how far is "buckling with different angles" more mathematical than physical?

- >>>*my guess is that the electron is made of many subparticles*
- >>
- >>*This _guess_ of yours is contradicted by experimental findings. But I*
- >>*know,you consider your guess out of the blue as much more trustworthy*
- >>*than any comparison with nature.*
- >
- > *dont be too sure of yourself*

> *it is a lot of 'intrpretatins of observations'*

Yes, but _you_ don't use any observations at all for your claims.

[...]

>>>> *Now, the electron density can be _measured_! And alas, nothing of this
>>>> sort was ever observed, in metals there are no "arms" at all and in
>>>> covalent crystals the orbitals are aligned with the shortest path
>>>> between atoms.*

>>>

>>>-----

>>> *may be just in simple cases like the oxygen Hydrogen
>>> but how can you measure the separation location of say
>>> the 3 connections of carbon?*

>>

>> *One can measure the electron density within a _crystal_.*

>

>-----

> *good for your naivity!*

> *hiow do you detect an electron positin ?*

For measuring the (time averaged) electron density, I don't need to know each electron's position.

>>> *do you have the tools for it*

>>> *is it reasonable to you that the tripple cond of two carbons*

>>> *will be on the same shortest line between them?*

>>

>> *I have no idea about which "trippel cond" you are talking.*

>

>-----

> *see above and try to do it with your own hands*

> *it is not too complicated*

But complicated enough for you to goof up the involved simple calculations.

[...]

>>> *while it is known that trhe Carbon electrons are separated*

>>> *to the famous tetraheder (3D !!)109 deg*

>>> *do you 'see' there with your instruments one bunch*

>>> *or 3 separeated 'beams' ??*

>>

>> *Nobody ever observed such "3 separated beams".*

>

>-----

> *because we dont have the tools for it.*

> *only by the power of thinking we can do it (at this stage)*

By power of thinking I can also postulate that the electrons are inhabited by extremely tiny penguins. Since they cannot be observed, nobody can prove me wrong.

But the result of *_your_* power of thinking even yields wrong results.

[...]

>>> *what is the overall number of lattice for
>>> all the elements of the periodic table
>>> it is one of the former questions that i raised
>>> in former articles
>>
>> Did you? And you didn't get an answer? Gosh, the internet is full of the
>> answer to this question: There are 14 bravais lattices.
>
> i waas speaking **only about the 92 **pure element lattice**!**

Then it seems to be only 12, cf. below.

> *not on their endless compounds
> do we speak about the same thing ??
> please give me examples of those 14 structures*

Is your lazyness unlimited?

> *associasted to the specific elements of the periodic table.*

They are not really associated to the elements, because the latter can occur in different crystal strcutures (called \alpha-, \beta-, \gamma-, ...-phase).

> *can you see there all the 14 ??*

Nope, two are missing and stuff different from fcc, bcc and hcp is mostly exotic (and with more than one atom in the primitve unit cell). Here we go:

simple cubic: \alpha-Polonium
fcc: Copper
bcc: Tungsten

hexagonal: Berylium (hcp actually)
rhombohedral: \alpha-Arsenic

simple tetragonal: \beta-Neptunium
body-centered tetragonal: Indium

simple orthorhombic: –
face-centered orthorhombic: \alpha-Sulfur
body-centered orthorhombic: –

sci.physics: Re: My New Website

base-centered orthorhombic: \alpha-Gallium

simple monoclinic: \alpha-Plutonium

base-centered monoclinic: \beta-Plutonium

triclinic: Californium

ciao

Lothar