

@106 - Sinisa Lazarek

**it's useless to discuss physics with you... utterly useless.**

How do you think that a candle is lit?

Posted by: Chelle | [May 21, 2012 5:25 PM](#)

109

"How do you think that a candle is lit?"

It isn't?

The waxy body of the candle is turned into gas which then burns incandescently.

Or do you mean "someone takes a taper to the wick, holds it there and waits until the candle wick ignites in a self-sustaining process"?

Posted by: Wow | [May 22, 2012 6:39 AM](#)

110

@109 - Wow

**The waxy body of the candle is turned into gas which then burns incandescently.**

Voilà, the candle burning mechanism is even more complex, but this was what I wanted to focus on, that it are the heat vibrations that weaken the solid wax into an inflammable/combustible substance. Such as how I could imagine that the vibrations caused by the high frequency & density of high energy particle collisions could weaken certain physical structures within its proximity.

btw here is a cool clip of how heat vibrations can travel through nothingness at first sight:  
<http://youtu.be/C5eTn5d0cvg>

Posted by: chelle | [May 22, 2012 7:13 AM](#)

111

"that it are the heat vibrations"

You must mean "thermal energy". Your phrasing there sounds like HG Wells or other victoriana windage on "natural philosophy". Please try to get in the same century as everyone else, hmm?

"that weaken the solid wax into an inflammable/combustible substance"

Yes, even in Victorian times, they knew this substance: gas.

Really, read up on the phases of matter: solid, liquid and gas (and in the 20thC, plasma).

"Such as how I could imagine that the vibrations caused by the high frequency & density of

high energy particle collisions could weaken certain physical structures within its proximity."

Thermal heat occurs in your room, did you know that?

Yet, somehow, this doesn't cause candles to spontaneously light themselves.

Now, why do you think, despite all this "heat vibration" going on (and in the sunlight, the "heat vibrations" are those of a body at 6000C, easily enough to vapourise candle wax), candles need to be lit by specific intervention?

Posted by: Wow | [May 22, 2012 9:08 AM](#)

112

@111 - Wow

• **Please try to get in the same century as everyone else, hmm?**

Ok, I'll try.

• **Yes, even in Victorian times, they knew this substance: gas.**

Right on.

• **Thermal heat occurs in your room, did you know that?**

Yes.

• **Really, read up on the phases of matter: solid, liquid and gas (and in the 20thC, plasma).**

You are forgetting Semi-liquid (glass) and BEC.

• **Thermal heat occurs in your room, did you know that?**

Yes, especially when I enter the room, because I am the coolest ; )

• **Yet, somehow, this doesn't cause candles to spontaneously light themselves.**

Of course because one has to light a match to get it on.

• **Now, why do you think, despite all this "heat vibration" going on (...), candles need to be lit by specific intervention?**

Combustion Process / Candle Flame Mechanism:

*"In this state they can then readily react with oxygen in the air, which gives off enough heat in the subsequent exothermic reaction to vaporize yet more fuel, thus sustaining a consistent flame. The high temperature of the flame causes the vaporized fuel molecules to decompose, forming various incomplete combustion products and free radicals, and these products then react with each other and with the oxidizer involved in the reaction."* <http://en.wikipedia.org/wiki/Flame>

And this is why I brought up the subject; the continuous high energy collisions, at a high frequency & density, and at one specific place in the nothingness that is filled with Dark matter (hot/cold), or Aether (gas/liquid) as it was called in the victorian era, could be compared to a sparkling match/lighter, whereby the continuous generated thermal energy moves through the air/nothingness/gas/liquid, to constantly heat up the matter/wax/atoms/protons/quarks in a distance, that will start to meltdown, and who may be then nearing the point of combustion (phase transition), increase the heat a little more and ... Pretty basic don't you think?

• (and in the sunlight, the "heat vibrations" are those of a body at 6000C, easily enough to vapourise candle wax)

I cannot follow you here, flame temperature of a candle is 1,400 °C.

Posted by: Chelle | [May 22, 2012 11:19 AM](#)

113

"You are forgetting Semi-liquid (glass) and BEC."

Nope, glass is not semi-liquid.

Bose-Einstein Condensates require a certain class of matter.

Odd how you don't know gas exists, though, and have instead to resort to woo-like terms to describe it when you bring these out.

I guess you wikipedia'd it all, hmm?

"Of course because one has to light a match to get it on."

So why isn't the heat vibrations of your room lighting the candle without the match?

"the continuous high energy collisions, at a high frequency & density, and at one specific place"

The "heat vibrations" in your living room are at a high energy, the collisions high energy collisions, high density and at one specific place (your living room).

So again, why isn't your candle spontaneously lighting up?

"I cannot follow you here, flame temperature of a candle is 1,400 °C"

Yes, I realise that you can wiki. You showed earlier. However, you've also shown that you have no comprehension of what you've read.

6000K is hotter than 1400C.

The sun's radiation is that of a body at 6000K.

Therefore why isn't a candle lighting up and evaporating in the sunlight?

It has high energy, one specific place.

So why do candles stay unlit?

Posted by: Wow | [May 22, 2012 12:26 PM](#)

114

@113 - Wow

• **So why do candles stay unlit?**

What you're asking is, why a candle here on earth isn't naturally lit by the sun, is that it?

The answer to this is rather simple; because the distance between the two bodies is too big for the wax to combust, it needs to be warmer. Am I right?

Well in that case, the [flash point](#) of wax (paraffin) is typically above 150° C, now did you know that temperatures on the moon can be above the boiling point of water 100° C and if we go a bit closer towards to sol, on Venus, we have temperatures of 460 °C. So what was the point you were trying to make?

btw I think you might like this clip: <http://youtu.be/paMF4ildjKs>

Posted by: Chelle | [May 22, 2012 1:38 PM](#)