

[About Us](#) | [Contact Us](#) | [Privacy Policy](#)[Home](#) > [Current News](#)

&gt;

Chemistry Expert: Carbon Dioxide can't cause Global Warming

# Chemistry Expert: Carbon Dioxide Can't Cause Global Warming

*Published on February 9, 2017*

Written by Dr Mark Imisides (Industrial Chemist)

 Search...

## Donate Today!

Currently, joining PSI is free. When you make a donation of the suggested amount of \$25 (any amount will help, though!) you will help to sponsor sound, alarmist-free scientific work.

[Donate](#)





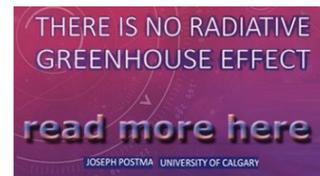
Scarcely a day goes by without us being warned of coastal inundation by rising seas due to global warming.

Why on earth do we attribute any heating of the oceans to carbon dioxide, when there is a far more obvious culprit, and when such a straightforward examination of the thermodynamics render it impossible.

Carbon dioxide, we are told, traps heat that has been irradiated by the oceans, and this warms the oceans and melts the polar ice caps. While this seems a plausible proposition at first glance, when one actually examines it closely a major flaw emerges.

In a nutshell, water takes a lot of energy to heat up, and air doesn't contain much. In fact, on a volume/volume basis, the ratio of heat capacities is about 3300 to 1. This means that to heat 1 litre of water by 1 °C it would take 3300 litres of air that was 2 °C hotter, or 1 litre of air that was about 3300 °C hotter!

This shouldn't surprise anyone. If you ran a cold bath and then tried to heat it by putting a dozen heaters in the room, does anyone believe that the water would ever get hot?



## Latest News

[More UN claims of impending climate doom](#) September 30, 2019

[THORIUM: A Tipping Point in History?](#) September 30, 2019

[Top Climate Scientist Criticizes 'Nonsense' Of 'Global Warming Crisis'](#) September 30, 2019

['Fridays-for-Hubraum' – a new Friday Movement](#) September 30, 2019

[New Way To Capture Heat and Turn It into Electricity](#) September 30, 2019

[Black Dragon: Breaking the Frizzle Frazzle of the Big Lie of Climate Change Science](#) September 29, 2019

The problem gets even stickier when you consider the size of the ocean. Basically, there is too much water and not enough air.

The ocean contains a colossal 1,500,000,000,000,000,000 litres of water! To heat it, even by a small amount, takes a staggering amount of energy. To heat it by a mere 1 °C, for example, an astonishing 6,000,000,000,000,000,000,000,000 joules of energy are required.

Let's put this amount of energy in perspective. If we all turned off all our appliances and went and lived in caves, and then devoted every coal, nuclear, gas, hydro, wind and solar power plant to just heating the ocean, it would take a breathtaking 32,000 years to heat the ocean by just this 1 °C!

In short, our influence on our climate, even if we really tried, is miniscule!

So it makes sense to ask the question – if the ocean were to be heated by 'greenhouse warming' of the atmosphere, how hot would the air have to get? If the entire ocean is heated by 1 °C, how much would the air have to be heated by to contain enough heat to do the job?

Well, unfortunately for every ton of water there is only a kilogram of air. Taking into account the relative heat capacities and absolute masses, we arrive at the astonishing figure of 4,000 °C.

That is, if we wanted to heat the entire ocean by 1 °C, and wanted to do it by heating the air above it, we'd have to heat the air to about 4,000 °C hotter than the water.

[Video: Dr. Tim Ball on victory over Michael Mann](#) September 28, 2019

[Video: MIT Professor Exposes the Climate change Carbon Credits Scam](#) September 27, 2019

[Dozens of Failed Climate Predictions For the Past 80 Years](#) September 27, 2019

[Eco Fail: 100's of Wind Turbine Blades Sent to Landfill](#) September 27, 2019

[Media Persists with Dishonest 'Climate Denial' Censorship Policy](#) September 27, 2019

[Major Ocean Warming Study Withdrawn By Nature](#) September 27, 2019

**Get A Daily Digest Of The Day's Headlines**

And another problem is that air sits on top of water – how would hot air heat deep into the ocean? Even if the surface warmed, the warm water would just sit on top of the cold water.

Enter your email address:

Thus, if the ocean were being heated by 'greenhouse heating' of the air, we would see a system with enormous thermal lag – for the ocean to be only slightly warmer, the land would have to be substantially warmer, and the air much, much warmer (to create the temperature gradient that would facilitate the transfer of heat from the air to the water).

Therefore any measurable warmth in the ocean would be accompanied by a huge and obvious anomaly in the air temperatures, and we would not have to bother looking at ocean temperatures at all.

So if the air doesn't contain enough energy to heat the oceans or melt the ice caps, what does?

The earth is tilted on its axis, and this gives us our seasons. When the southern hemisphere is tilted towards the sun, we have more direct sunlight and more of it (longer days). When it is tilted away from the sun, we have less direct sunlight and less of it (shorter days).

The direct result of this is that in summer it is hot and in winter it is cold. In winter we run the heaters in our cars, and in summer the air conditioners. In winter the polar caps freeze over and in summer 60-70% of them melt (about ten million square kilometres). In summer the water is warmer and winter it is cooler (ask any surfer).

[HOME](#)

[LATEST NEWS](#)

[SUPPORT](#)

[PUBLICATIONS](#)

[PROM](#)

[ABOUT](#)

[CON'](#)

[Subscribe](#)

Delivered by  
[FeedBurner](#)

## Recent Comments

Spkr4TheDead on  
[Video: Dr. Tim Ball on victory over Michael Mann](#)

Thanks John O'Sullivan. Great read, Awesome news.

Spkr4TheDead on  
[Video: Dr. Tim Ball on victory over Michael Mann](#)

Congratulantiions!!  
Made my day.

Your's too I bet....  
David Wieland on  
[Black Dragon: Breaking the Frizzle Frazzle of the Big Lie of Climate Change Science](#)

All of these changes are directly determined by the amount of sunlight that we get. When the clouds clear and bathe us in sunlight, we don't take off our jumper because of 'greenhouse heating' of the atmosphere, but because of the direct heat caused by the sunlight on our body. The sun's influence is direct, obvious, and instantaneous.

If the enormous influence of the sun on our climate is so obvious, then, by what act of madness do we look at a variation of a fraction of a percent in any of these variables, and not look to the sun as the cause?

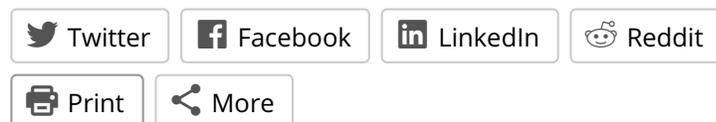
Why on earth (pun intended) do we attribute any heating of the oceans to carbon dioxide, when there is a far more obvious culprit, and when such a straightforward examination of the thermodynamics render it impossible.

\*\*\*\*

*Dr. Mark Imisides is an industrial chemist with extensive experience in the chemical industry, encompassing manufacturing, laboratory management, analysis, waste management, dangerous goods and household chemistry. He currently has a media profile in The West Australian newspaper and on Today Tonight. For a sample of his work visit [www.drchemical.com.au](http://www.drchemical.com.au)*

Read more at [quadrant.org.au](http://quadrant.org.au)

#### Share This:



#### Related

I'm rather surprised by the statement that a green...  
[Zoe Phin on Vacuum Chamber Temperature Test Debunks Climate Crisis Claims](#)  
 Al, The other problem with Rabett is a violation o...  
[Zoe Phin on Vacuum Chamber Temperature Test Debunks Climate Crisis Claims](#)  
 Al, Why do you care about so much about albedo? It...  
[jerry krause on More UN claims of impending climate doom](#)  
 Hi Tom Excellent 'factual' comment. Have a good da...  
[AlJones1816 on Vacuum Chamber Temperature Test Debunks Climate Crisis Claims](#)

Climate Fraud  
Exposed: CO2  
doesn't rise up,  
trap and retain  
heat  
January 30, 2017

What Climate  
Alarmists Don't  
Want You  
Knowing About  
CO2  
March 21, 2015

Empirical  
Evidence of Man-  
made Global  
Warming?  
December 5,  
2016

Hi Jerry,  
apologies, I only  
saw your  
comment just...  
AlJones1816 on  
[Vacuum Chamber  
Temperature Test  
Debunks Climate  
Crisis Claims](#)

Zoe, You are  
correct that there  
is not a single  
em...

jerry krause on  
[Vacuum Chamber  
Temperature Test  
Debunks Climate  
Crisis Claims](#)

Hi Zoe, Evidently  
you do not  
believe historical  
fa...

jerry krause on  
[Vacuum Chamber  
Temperature Test  
Debunks Climate  
Crisis Claims](#)

Hi Al, Evidently  
you do not  
believe historical  
fac...

## Comments (27)



**Carl Brehmer**

February 9, 2017 at 5:41 pm | <#>

You have addressed one version of the “greenhouse effect” hypothesis—the version that asserts that the atmosphere because of downwelling IR radiation transfers heat to the surface.

The second most popular version of the “greenhouse effect” hypothesis simply asserts that the atmosphere prevents the surface from cooling as fast as it would if there were no atmosphere via IR radiation directly into outer space. In this second version carbon dioxide bolsters the ability of the atmosphere to act as a “radiation barrier” of sorts. How would you address this second version?



**Daymo6000**

February 9, 2017 at 7:01 pm | <#>

If you want to insulate something you reduce it's ability to absorb or emit radiation through convection,

conduction or radiation, specifically, you reduce it's emissivity, it's ability to absorb and emit energy.

Greenhouse gasses are typified by their high emissivity, there is no reason to believe they insulate or trap heat and instead will increase the rate of radiation to space. Perhaps this is why the hypothesised mid tropospheric hotspot turned out to be a cool spot, the atmosphere works in entirely the opposite fashion than that proposed by "climate scientists".



**Rosco**

February 12, 2017 at 11:27 pm | #

I'd say firstly that all of the satellite data sets show that Earth is emitting more radiation to space not less over almost the whole of the period from the late 60's to the present day. Whilst this indicates the temperature is slightly higher it is entirely inconsistent with "heat trapping" which logic demands less emitted to space evidenced by the effect of volcanic aerosols indicating a lower temperature.

Then I would say that the whole atmosphere changes temperature all the time, not just "greenhouse gases".

Further 99% of the atmosphere absorbs so little IR that it is simply stupid to assert that the 2% maximum water vapour, or near zero % in the hottest locations such as tropical, subtropical and temperate deserts, and the tiny 0.04% CO<sub>2</sub> transfers ALL the thermal energy to 99% of the atmosphere in the time frames observed – say a maximum of 9 hours to mid afternoon when the atmosphere usually ceases increasing in temperature – given the small percentages involved.

And why does the atmosphere stop heating early afternoon with all of that “trapped radiation” still buzzing around?

Then I would say that the hypothesis is that 99% of the atmosphere allegedly does not radiate much at all as it consists of non “greenhouse gases” – if it does radiate significantly then a tiny increase from 0.012 % increase in CO<sub>2</sub> is insignificant.

But at the same time climate alarmists assert that ~83% of the radiation from Earth to space comes from the atmosphere which by logic means the 2% water vapour plus 0.04% CO<sub>2</sub> and a few parts per billion methane, chlorofluorocarbons etc. etc.

If this is true surely increasing the concentration of these "GHGs" results in the potential to emit more to space not less, just as all the satellite data shows.

The atmosphere has mass and absorbs thermal energy and increases in temperature – all of it.

I'd say that the moon's surfaces take a long time to cool without any "back radiation" or "radiation barrier" despite radiating at a far higher power than evidenced on Earth and our 24 hour period does not allow sufficient time for significant cooling other than at latitudes remote from the equator during winter. It takes months of low to no solar radiation for polar ice to reach maximum and months to melt.

Finally there is the density problem which climate science seems to believe is irrelevant.

Just how does the atmosphere at less than 1/1000th density of the surfaces – in reality even lower and a significantly lower emissivity than the surfaces AND a significantly lower temperature – manage to emit 83% of the radiation emitted by the surfaces which are at a higher temperature according to Trenberth et al ? After all water has a latent heat of 2257 kJ/kg

versus 574 for CO<sub>2</sub> but CO<sub>2</sub> does not undergo any phase changes at ambient temperatures and water vapour is almost never 2% of the atmosphere.

That alone doesn't make any sense to me at all.

### **Rosco**

February 14, 2017 at 9:57 pm | #

Another thought – the moon's surfaces heat to much higher levels because they do not have an atmosphere to:-

1. Reduce the amount of radiation reaching the surface; and,
2. Remove heat from the surfaces by contact and convection.

Our atmosphere reduces the Sun's heating power – it doesn't augment it. Talking about night is irrelevant as there is no solar radiation incident on the surfaces. Just because the atmosphere has mass and absorbs thermal energy maintaining air temperature over night does not mean it heats warmer surfaces.

A “radiation barrier” is a fiction. Surely the cavity experiments established that objects radiate in proportion to their temperature NOT in proportion to the temperature difference ?

To solve the impossibility of solving equations with too many unknowns to ever solve the scientists designed the cavity experiment to remove the ambient temperature from the observations. Any radiation entering the cavity is unlikely to exit and quickly becomes part of the field in the cavity leaving one temperature to consider – the temperature inside the cavity.

Once you accept that radiant emission is proportional to an object’s temperature alone it is obvious that any idea of a “radiation barrier” is just “back radiation” in disguise. The mechanism the supporters of this “radiation barrier” assert is just the “net” form of the SB equation – “back radiation” in disguise.

The object emits 470 W/m<sup>2</sup> but it absorbs 235 W/m<sup>2</sup> – the radiation barrier has reduced the object’s output so it must heat up to establish a higher radiative output.

I don’t buy that because it asserts that despite the hotter object emitting significantly more “photons” overall

and emitting higher energy photons than the colder object somehow it is "forced" to a higher temperature.

Such an assertion is easily proven incorrect by a mathematical analysis.

### **Jeff Greenwell**

February 9, 2017 at 8:18 pm | <#>

Carl, excellent question! ... Daymo600, excellent and factual response!

### **Martintfre**

February 11, 2017 at 3:19 pm | <#>

Ignoring the massive difference between heating the waters and the atmosphere – here is another thought experiment.

Imagine a box of 2500 marbles all at room temp – to raise the temperature of all the marbles 1 degree ya get to grab a single marble and heat it .. well that would require heating that single marble 2500 degrees .. that is your CO2 molecule at 400 parts per million

### **Natejgardner**

February 13, 2017 at 12:23 am | <#>

Ocean temperature is far more complicated than you describe. Realistically, we're talking about surface temperature, not the entire volume of the ocean. It actually takes a significantly lower amount of energy to raise the average temperature of the surface of the ocean than the number you present. It's actually rather difficult to get accurate measurements for this temperature, and there are an enormous number of factors that affect this value. For example, the volumetric flow rates of current and air affect the heat transfer rate. If very cold air is blown over the ocean surface very quickly, it will significantly cool. Thus any meteorological changes can vastly affect the temperature of the ocean surface. It's tough to just say how much any factor affects the surface temperature because it's very difficult to measure everything going on.

### **Carl Brehmer**

February 13, 2017 at 7:49 am | #

"It's tough to just say how much any factor affects the surface temperature because it's very difficult to measure everything going on."

Exactly, thus the folly in the oft quoted meme that 97% of all scientist agree that any warming that is happening anywhere in the ocean is caused by human beings burning hydrocarbons for energy, because doing so produces CO<sub>2</sub> as a bi-product, which somehow heats up ocean water.

## **OBloodyHell**

February 14, 2017 at 2:59 am | #

}}} For example, the volumetric flow rates of current and air affect the heat transfer rate.

What it does NOT do is affect the heat transfer AMOUNT. Which is what this argument is based on. All your example does is take a large amount of air past a given volume of water, allowing the water to carry away a significant amount of the heat in the localized region.

The amount of heat transferred away by CONVECTION EFFECTS does not change, and it is still MASSIVE.

So, your observation, while relevant on some levels, is not relevant for the earth as a whole. The specific heat storage value of the ocean needs to be substantially ramped up just to raise the earth's "average temperature" by anything significant. The oceans would have to be showing very significant warming. And this warming would be obvious in terms of hurricane production, given that the oceans are the main driver of this as they feed substantial heat value into the atmosphere.

Instead, we are not seeing ANY significant increase (despite hysterical claims to the contrary) in the severity and number of hurricanes.

In actual FACT, the class-3 hurricane which struck the eastern seaboard this last fall was THE FIRST class-3 or above hurricane to strike the entire US eastern seaboard since 2005 — which happens to be THE LONGEST SUCH PERIOD in the last 195 years (ca, 1820) since there was a wide enough population distribution on the eastern seaboard to record such a landfall with any veracity.

Yes, there can be other causes, but, among other things, it means that the northern cool air mass has also been predominating for the last decade and more. ALSO inexplicable if the Caribbean is actually warming significantly.

All around, it suggests AGW's entire basis is highly doubtful, to say nothing of the vast plethora of predictive failures by "Scientists" in the last 20+ years.

"The validity of a science is its ability to predict".

- The Schwartzberg Test -

The Late Jeanne Dixon had a more reliable predictive record.

**OBloodyHell**

February 14, 2017 at 3:00 am  
| #

}}} allowing the water  
to carry  
"air". DOH.

**Chemistry Expert: Carbon Dioxide Can't Cause Global Warming - Truth Movement News**

February 13, 2017 at 5:10 am | #

[...] source: <https://principia-scientific.org/chemistry-expert-carbon-dioxide-cant-cause-global-warming/> [...]

**Nick**

February 13, 2017 at 8:23 pm | #

The Core of our planet is what controls our weather.  
Not the Sun. Silly boys. That is what is heating up the planet.

**Jerry L Krause**

February 14, 2017 at 12:56 am | #

Hi Nick,

At one time I would have considered your statement to be nonsense. But for some time I have been considering that which is known history: evidence of the cyclic glaciation of the northern portions of the North Hemisphere's continents and evidence of continental drift (plate tectonics).

Geologists, in 1930, rejected that evidences of continental drift and it seems no respectable geologist could suggest that maybe continents could drift for nearly a half-century. This because it could not be explained how continents could drift. No matter how slowly this drift is, it seems obvious a great force is involved. We know some volcanoes have blown their tops with a great force. And I believe there is only one origin of this great force which continues to act and it is from the earth's interior. However, nearly two decades ago I learned that Immanuel Velikovsky had proposed another 'wild' idea.

The formation of glaciers requires more than cold temperatures. Their formation requires precipitation that is ice and often this ice is snow. And precipitation as we know it, requires evaporation. Evaporation is endothermic process which requires energy to continuously cause the evaporation to occur. So, I have played

with the idea the earth's surface at the bottom of the Arctic Ocean could have been warmed greatly, at times, just as we understand to be the cause of volcanoes. Just a thought.

So I can consider that the earth's surface at the bottom of oceans and seas does not have to be at a constant temperature. And since it is a common argument that the oceans can be heated by the influence of a minor trace atmosphere gas and so having a ocean heated, or cooled, at the bottom is certainly not an impossibility.

Have a good day, Jerry

## **Farhad**

February 16, 2017 at 1:39 am | #

As I read the comments written by every body I felt there was a lot of information given by each one of you, and at times I was not sure if some you believed whether the global warming ( if there is one ) is caused by human activity in a meaningful way. Would you all be kind and comment on the following presentation on global warming? I appreciate it if each one of you clearly state whether the speaker makes sense, or if he is missing something, thank you all

I could not post a link here. but I am referring to the youtube titled

**Farhad**

February 16, 2017 at 1:43 am | #

Forgot to include the name of the  
youtube video: Nobel Laureate  
Smashes the Global Warming Hoax

**Fake Science On An End Run | The Universal Spectator**

February 16, 2017 at 11:15 pm | #

[...] Chemistry Expert: Carbon Dioxide can't cause Global Warming [...]

**Chemistry Expert: Carbon Dioxide Can't Cause Global Warming—By Dr Mark Imisides | The Invisible Opportunity: Hidden Truths Revealed**

February 20, 2017 at 3:29 pm | #

[...] via Chemistry Expert: Carbon Dioxide can't cause Global Warming – Principia Scientific Inter... [...]

**Chemistry Expert: Carbon Dioxide Can't Cause Global Warming - Conservative News & Right Wing News | Gun Laws & Rights News Site : Conservative News & Right Wing News | Gun Laws & Rights News Site**

February 20, 2017 at 6:12 pm | #

[...] <https://principia-scientific.org/chemistry-expert-carbon-dioxide-cant-cause-global-warming/> [...]

**Chemistry Expert: Carbon Dioxide Can't Cause Global Warming'. Principia Scientific International. | Amnesiaclinic**

February 20, 2017 at 8:46 pm | #

[...] <https://principia-scientific.org/chemistry-expert-carbon-dioxide-cant-cause-global-warming/> [...]

### **Why Carbon Dioxide Can't Cause Global Warming | Science-Theory**

February 22, 2017 at 9:33 am | #

[...] Chemistry Expert: Carbon Dioxide can't cause Global Warming [...]

### **Chemistry Expert: Carbon Dioxide Can't Cause Global Warming | Easton Spectator**

February 22, 2017 at 6:17 pm | #

[...] Read More HERE [...]

### **Of Course Carbon Dioxide Doesn't Cause Climate Change (Capitalized To Denote Conspiratorial Rhetoric As Opposed To A Natural Climate-Is-Never-Not-Changing Phenomenon) | Doctissimus @ Port Urla**

February 22, 2017 at 9:58 pm | #

[...] <https://principia-scientific.org/chemistry-expert-carbon-dioxide-cant-cause-global-warming/> [...]

### **Chemistry Expert: Carbon Dioxide Can't Cause Global Warming | Richard Presser's Blog - The Sceptical Bastard**

February 23, 2017 at 4:03 am | #

[...] Scarcely a day goes by without us being warned of coastal inundation by rising seas due to global warming. [...]

#### **Mheavrin**

February 23, 2017 at 4:37 pm | #

Question: If the ocean isn't heating up, or isn't heating up very little, how does this address the CO2 increase caused from outgassing from the oceans warming?

### **John O'Sullivan**

February 23, 2017 at 4:51 pm | #

Mheavrin, Robert W. Felix has addressed that issue with his post: <https://principia-scientific.org/climate-scientists-ignore-ten-million-underwater-volcanoes/>

He wrote:

'When I began researching and writing Not by Fire but by Ice in 1991, scientists guesstimated that there were 10,000 submarine volcanoes in the entire world.

Two years later, marine geophysicists discovered 1,133 previously unmapped underwater volcanoes off the coast of Easter Island.

And they were huge. (Still are.) Some of the newly-found volcanoes rose almost 1½ miles above the seafloor. Even then, their peaks remained about 1½ miles below the water's surface. They're packed into a relatively small area about the size of New York state.

We have no idea how many volcanoes may be lurking beneath the seas. What we do know, is that they are pumping awesome amounts of re-hot basalt – up to 1,200°C (2,200°F) hot – into the inky black water.'

### **Rosco**

February 23,  
2017 at 9:55 pm

| #

“During El Niño, warm surface water appears farther east and is spread over a broader area.”

The eastern Pacific off the American coasts is home to an active volcanic region named for some strange reason the “Ring of Fire”.

Volcanic activity waxes and wanes following pressure buildup and release.

Why is it so unlikely that El-Niño events are not caused by underwater activity

heating the oceans and when the pressure buildup has been released and the hot material ceases flowing into the oceans the water cools and a La-Niña event results ?

After a period of time conditions build sufficient for the next El-Niño and the cycle repeats.

Such a cycle cannot be discounted.

**25 February, 2017: After 85 Years In Business, Family Christian Bookstores, All 240 Locations, Are Closing Down – Kylekenleykopitke**

February 25, 2017 at 3:46 pm | #

[...] <https://principia-scientific.org/chemistry-expert-carbon-dioxide-cant-cause-global-warming/> [...]

Comments Are Closed

Portions copyright © Principia Scientific International

Principia Scientific International (PSI) is a not-for-profit community interest association.

PRINCIPIA SCIENTIFIC INTERNATIONAL is legally registered in the UK as a company incorporated for charitable purposes. Head Office: 27 Old Gloucester Street, London WC1N 3AX. Telephone: Calls from within the UK: 020 7419 5027. International dialling: (44) 20 7419 5027.



u