Decline the global warming through domination the thermal radiation & carbon monoxide of the exhaust

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Abstract: Global Warming is the increase of Earth's average surface temperature due to effect of greenhouse gases, such as carbon dioxide emissions from burning fossil fuels or from deforestation, which trap heat that would otherwise escape from Earth. This is a type of greenhouse effect.

Represent a significant car exhaust causing major sources of air pollution as a result of increasing the number of vehicles on the capacity of roads and low average speed of the car. Led both population growth and the movement of economic development and increase the number of vehicles in the past last loads to increase air pollution range of pollutants is the particulate matter and oxides of carbon and nitrogen oxides and hydrocarbons.

Index Term: Environmental pollution, Sunlight, Thermal radiation, Porous material, Permeable material.

Introduction

Earth's climate is mostly influenced by the first 6 miles or so of the atmosphere which contains most of the matter making up the atmosphere. This is really a very thin layer if you think about it. In the book The End of Nature, author Bill McKibbin tells of walking three miles to from his cabin in the Adirondack's to buy food. Afterwards, he realized that on this short journey he had traveled a distance equal to that of the layer of the atmosphere where almost all the action of our climate is contained. In fact, if you were to view Earth from space, the principle part of the atmosphere would only be about as thick as the skin on an onion! Realizing this makes it more plausible to suppose that human beings can change the climate. A look at the amount of greenhouse gases we are spewing into the atmosphere (see below), makes it even more plausible.

How much have we increased the Atmosphere's CO2 Concentration?

Human beings have increased the CO2 concentration in the atmosphere by about thirty percent, which is an extremely significant increase, even on inter-glacial timescales. It is believed that human beings are responsible for this because the increase is almost perfectly correlated with increases in fossil fuel combustion, and also due other evidence, such as changes in the ratios of different carbon isotopes in atmospheric CO2 that are consistent with "anthropogenic" (human caused) emissions. The simple fact is, that under "business as usual"

conditions, we'll soon reach carbon dioxide concentrations that haven't been seen on Earth in the last 50 million years.

Combustion of Fossil Fuels, for electricity generation, transportation, and heating, and also the manufacture of cement, all result in the total worldwide emission of about 22 billion tons of carbon dioxide to the atmosphere each year. About a third of this comes from electricity generation, and another third from transportation, and a third from all other sources.

This enormous input of CO2 is causing the atmospheric levels of CO2 to rise dramatically. The following graph shows the CO2 levels over the past 160 thousand years (the upper curve, with units indicated on the right hand side of the graph). The current level, and projected increase over the next hundred years if we do not curb emissions, are also shown (the part of the curve which goes way up high, to the right of the current level, is the projected CO2 rise). The projected increase in CO2 is very startling and disturbing. Changes in the Earth's average surface temperature are also shown (the lower curve, with units on the left). Note that it parallels the CO2 level curve very well.

The causes of environmental pollution

Produced overpopulation in many major cities damage. Busy streets have been unable, and power plants and water purification plants, and sewage plants and other to meet the needs of this huge inflation of the population; also led industrial progress to bring enormous pressure on many of the natural resources, is no longer the environment is able to renew their resources and consumption of waste resulting from activities various human, Smoke rising from car exhaust and factory chimneys and power plants as well as some bug or heavy metals such as lead fumes led to air pollution, where the fumes remain suspended in the air for several days. This is what we call smog, and serious effects do not appear on the human directly, but in the long run to dementia and dementia and attention deficit disorder, memory, hallucinations and delusions, and which leads to mental retardation and depression, including those affecting the respiratory system Pollution, greenhouse gases as burning fossil fuels leads to the rise of large amounts of carbon dioxide into the atmosphere.

Figure [1] The Black clouds

Sunlight

Pure white light such as sunlight actually contains all of the colors of the spectrum. Each component color is refracted differently when passing from

one medium into another medium with a different refractive index. This is why sunlight is separated into the color spectrum when passing through a prism. A complimentary refraction occurs if the light passes back to the original medium.

Color Measurement Terminology

The true color of a transmissive sample is the color measured in the sample after the turbidity from suspended or colloidal matter has been removed through filtration or other liquid-solid separation processes. We refer to this as a filtered sample.

The color of a filtered sample can be expressed in terms of three values: The hue is designated by the term "dominant wavelength," the degree of brightness is designated by the term "luminance," and the saturation (pale, pastel, etc.) is designated by the term "purity."

The relationship between dominant wavelengths and hue is shown below: Wavelength range (nm) Hue

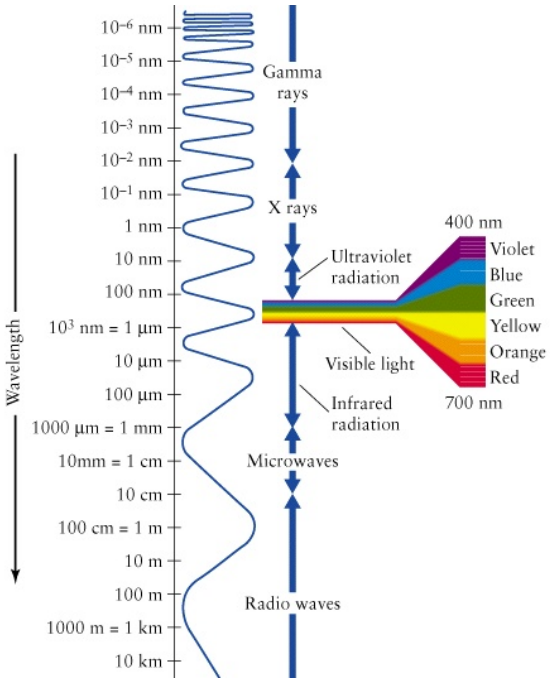

Figure [2] the wave length scale

Transmitted vs Reflected Light

Transmissive colored substances are neither fully transparent (transmitting all colors of light) or fully opaque (transmitting none of them). Instead, transmissive colored substances are transparent to some colors and opaque to others. The object passes or reflects some colors and absorbs others, deriving the observed (by the eye) color from the fractions that have not been absorbed. Thus, a relatively transparent liquid will absorb some components of white light, while allowing other components to pass through. Detection is performed directly through the liquid, with the light source and detector arranged in a straight line. A relatively opaque or solid object with color will also absorb some fraction of white light, while reflecting other fractions. Refractive measurement is made at an angle, with different results obtained at different

angles. ChemScan is designed for the analysis of transmissive liquids and relies on the percent of light transmission at numerous wavelengths for analysis.

Thermal Radiation

Thermal radiation is one of the fundamental mechanisms of heat transfer.

via electromagnetic radiation generated by the thermal motion of charged particles in matter. All matter with a temperature greater than absolute zero emits thermal radiation. When the temperature of the body is greater than absolute zero, inter-atomic collisions cause the kinetic energy of the atoms or molecules to change. This results in charge-acceleration and/or dipole oscillation which produces electromagnetic radiation, and the wide spectrum of radiation reflects the wide spectrum of energies and accelerations that occur even at a single temperature.

Examples of thermal radiation include the visible light and infrared light emitted by an incandescent light bulb, the infrared radiation emitted by animals and detectable with an infrared camera, and the cosmic microwave background radiation. Thermal radiation is different from thermal convection and thermal conduction—a person near a raging bonfire feels radiant heating from the fire, even if the surrounding air is very cold.

Sunlight is part of thermal radiation generated by the hot plasma of the Sun. The Earth also emits thermal radiation, but at a much lower intensity and different spectral distribution (infrared rather than visible) because it is cooler. The Earth's absorption of solar radiation, followed by its outgoing thermal radiation are the two most important processes that determine the temperature and climate of the Earth.

If a radiation-emitting object meets the physical characteristics of a black body in thermodynamic equilibrium, the radiation is called blackbody radiation. Planck's law describes the spectrum of blackbody radiation, which depends only on the object's temperature. Wien's displacement law determines the most likely frequency of the emitted radiation, and the Stefan–Boltzmann law gives the radiant intensity.

Porous material

The energy costs associated with the separation and purification of industrial commodities, such as gases, fine chemicals and fresh water, currently represent around 15 per cent of global energy production, and the demand for such commodities is projected to triple by 2050 (ref. 1). The challenge of developing effective for carbon dioxide (CO_2) than for other gases; in addition to its involvement in climate change, CO_2 is an impurity in natural gas, biogas (natural gas produced from biomass), syngas (CO/H_2, the main source of hydrogen in refineries) and many other gas streams. In the context of porous crystalline materials that can exploit both equilibrium and kinetic selectivity, size selectivity and targeted molecular recognition are attractive characteristics for CO_2 separation and capture, as exemplified

by zeolites 5A and 13X (ref. 2), as well as metal-organic materials (MOMs). Here we report that a crystal engineering or reticular chemistry strategy that controls pore functionality and size in a series of MOMs with coordinately saturated metal centres and periodically arrayed hex fluorosilicate (SiF(2-)(6)) anions enables a 'sweet spot' of kinetics and thermodynamics that offers high volumetric uptake at low CO2 partial pressure (less than 0.15 bar). Most importantly, such MOMs offer an unprecedented CO2 sorption selectivity over N2, H2 and CH4, even in the presence of moisture. These MOMs are therefore relevant to CO2 separation in the context of post-combustion (flue gas, CO2/N2), pre-combustion (shifted synthesis gas stream, CO2/H2) and natural gas upgrading (natural gas clean-up.

Figure [3] Porous material

escaping a facility's smokestacks. But state-of-the-art processes are expensive, result in a significant reduction in a power plant's output, and yield toxic byproducts. The new technique employs an abundant and environmentally benign sorbent: sodium carbonate, which is kitchen-grade baking soda. The microencapsulated carbon sorbents (MECS) achieve an order-of-magnitude increase in CO2 absorption rates compared to sorbents currently used in carbon capture. Another advantage is that amines break down over time, while carbonates have a virtually limitless shelf life.

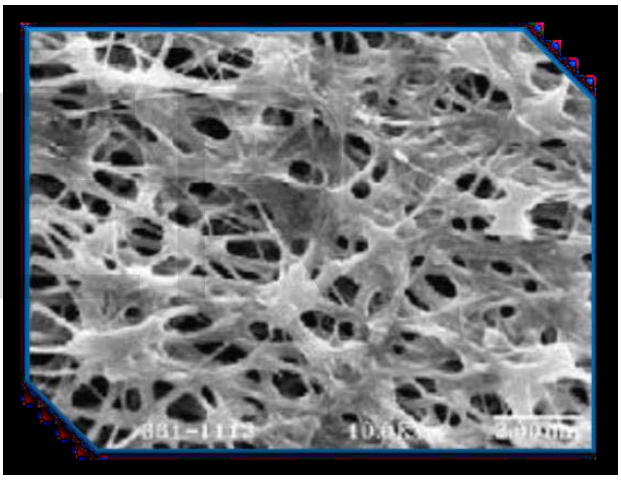

Figure [4] Permeable material

Permeable material

Current carbon-capture technology uses caustic amine-based solvents to separate CO2 from the flue gas

Filtration process

Pyramidal absorber are typically thick materials with pyramidal or cone

structures extending perpendicular to the surface in a regularly spaced pattern. Pyramidal absorbers were developed so that the interface presents a gradual transition in Impedance from air to that of the absorber. The height and periodicity of the pyramids tend to be on the order of one wavelength. For shorter structures, or longer wavelengths, the waves are effectively met by a more abrupt change in the impedance.

Pyramidal absorbers thus have a minimum operating frequency above which they provide high attenuation over wide frequency and angle ranges. These absorbers provide the best performance. The disadvantage of pyramidal absorbers is their thickness and tendency to be fragile. They are usually used for anechoic chambers. A more robust flat "pyramidal" absorber has been fabricated using multilayers with a pyramidal type structure being described by resistive sheets. Pyramidal and wedge shaped absorbers have been designed using a Tschebyshev transformer technique and have been investigated with Finite Element Methods.

This material is typically a slab composed of a low loss material mixed with a lossy material. The lossy component is homogeneously dispersed parallel to the surface, with a gradient perpendicular to the surface and increasing into the material. One type of material includes an open celled foam or 3-d plastic net, dipped or sprayed with lossy material from one side, or allowed to drain and dry. It is difficult to Reproducibly fabricate a gradient in this manner. A second type is composed of homogeneous layers with increasing loading in the direction of propagation (i.e. the gradient is created as a step function).

The advantage of these materials is that they are thinner than the pyramidal absorbers.

The disadvantage is that they have poorer performance and it is best to vary the Impedance gradient over one or more wavelengths.

Resonant materials are also called tuned or quarter wavelength absorbers and include

Dallenbach layers, Salisbury Screen and Jaumann layers. In this class of materials the

impedance is not matched between incident and absorbing media and the material is thin so that not all the power is absorbed. This arrangement results in reflection and transmission at the first interface. The reflected wave undergoes a phase reversal of π. The transmitted wave travels through the absorbing medium and is reflected from a metal backing. This second reflection also results in a phase reversal of π before the wave propagates back to the incident medium. If the optical distance travelled by the transmitted wave is an even multiple of ½ wavelengths then the two reflected waves

will be out of phase and destructively interfere. If the magnitude of the two reflected waves is equal then the total reflected intensity is zero.

After the carbons deposit in the material it may be uses recycle industry such as dry batteries.

Conclusion

Many of the absorber structures considered here would be useful for human being to reduce the effect of carbon mono oxide as much as possible in addition make uses of deposited material to recycle it into useful product with the aim of keeping the environment clean.

Recommendation

I hope to continue the R&D about this issue.

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