Thermodynamics and Nuclear Fusion
J Aetherom Res 4, 12: 1-17 (2026)

The Erroneous Notion of Temperature in Modern Thermodynamics and its Negative Implications for Thermonuclear Fusion

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Abstract

Modern thermodynamics treats temperature as a kind of energy, as if it were heat itself; and, consequently, it treats entropy as if it were a dimensionless index or coefficient. We have shown at length that entropy is neither an index nor some ersatz replacement for energy. In the present communication we demonstrate how the concept and functions of temperature in modern thermodynamics are erroneous. Then we propose a radically novel treatment of temperature based on physical data and foundational analytical relations. We prove our point by illustrating the current temperature-based illusions regarding thermonuclear fusion.

ISSN 1915-8408

Communication

1. What is the dimensionality of temperature?

Herbert Callen, one of the founders of modern thermodynamics, claimed [1] that to solve the dimensionality of temperature all one had to do was *arbitrarily decide* that entropy is dimensionless, so that the dimensionality of temperature would equal that of energy, when one divides energy by entropy:

$$T = Q/S = M\,L^2\,T^{-2} =\int= L^3\,T^{-2}$$

The problems raised by the dimensionality of temperature cannot, however, be dealt with *arbitrarily*, as Callen claims. The problem has many interlocked subsidiaries. An immediate one: what is the dimensionality of the entropy function given by Boltzmann's constant k (or by its molal entropy counterpart, the "gas constant" R)? It is used in the determination of the generic root mean square velocity of ideal or quasi-ideal gases, as

$$v_{rms} = [(\gamma\,kT)/0.5\,m]^{0.5}$$

where γ is a numerical multiplier of k characteristic of each gas. We have shown [2], how this equation describes solely the velocity of molecular free rotation with the *corrected* and empirically confirmed form

$$v_{rms} = [(\gamma\,kT)/m]^{0.5} =\int= (\gamma\,kT/\lambda_n)^{0.5}$$

Callen's proposal reduces k itself to a dimensionless coefficient: k is expressed as energy per degree kelvin, but since the degree kelvin is itself an expression of energy, k is necessarily dimensionless. Then, one must arrive at the dimensionality of the differential of temperature to mass, as a strange concept that can hardly be equated to a velocity:

$$(T/m)^{0.5} = [(L^3\,T^{-2})/M])^{0.5} = (L^{1.5}\,T^{-1})/M^{0.5}$$

In effect, in an irrelevant victory for our side, it can only be equated to a velocity if mass is treated by its massfree equivalence (!!):

$$(T/m)^{0.5} =\int= (T/\lambda_n)^{0.5} = [(L^3\,T^{-2})/L])^{0.5} = L\,T^{-1}$$

Irrelevant victory because temperature simply does *not* have the dimensionality of energy, and there is plenty of data to corroborate this fact. It is rather k that has the dimensionality of a massfree force

$$k = (L^3\,T^{-2})/{}^{\circ}K =\int= (L^3\,T^{-2})/L = L^2\,T^{-2}$$

because the dimensionality of temperature is that of a single length in the Space-manifold:

$$(\gamma\, \mathrm{kT/m})^{0.5} =\!\int\!= (\gamma\, \mathrm{kT}/\lambda_n)^{0.5} = [(L^3\, T^{-2})/L])^{0.5} = L\, T^{-1}$$

(For those not familiar with the aetherometric equivalences of k [3-4], note the main one: k = 83.143869 $\mathrm{m^3\ sec^{-2}\ °K^{-1}}$.)

The problem is, of course, much deeper than this, for the simple reason that modern physics and thermodynamics do not actually know what the product kT is, or actually denotes. It was our work that discovered how this product describes the electromagnetic quantum energy of an optothermal photon [3, 5-7]

$$Q_{micro} = kT = h\upsilon = \lambda_0\, c^2$$

- where λ_0 is the length of the photon's path (which is a function *distinct* from the wavelength of light). But temperature, such as one measures it as the temperature of a molecular substrate, is only such for our *macroscopic thermometers* when a mole of photons in a mole of substance (1:1 modal photon per molecule) has the same energy

$$N_A\, h\upsilon = N_A\, kT = RT$$

This breakthrough permitted the definition of *a new constant*, expressed in meters per degree kelvin - and thus, ultimately, the determination of the length equivalency of the degree kelvin [4, 7]. Irrespective of the size of λ_0 and the temperature T, the new constant is

$$\lambda_0/T = k/c^2 = 9.25100305 * 10^{-16}\ \mathrm{m\ °K^{-1}}$$

for any optothermal photon. Without it, determination of the length-equivalence of T remains physically opaque. With the above constant, that determination is straightforward and identifies how temperature is a molar quantity made up by the sum of all (an Avogadro number of) the λ_0 paths of the primary photons in a mole of any substance, no matter what the temperature is [4-5, 7]:

$$N_A \lambda_0/T = N_A k/c^2 = N_A (9.251 * 10^{-16} \text{ m °K}^{-1}) = R/c^2 =$$
$$= 5.571080531 * 10^8 \text{ m °K}^{-1}$$

Thus, one degree kelvin is a molar temperature equivalent to a length measure of:

$$T_{1°} (N_A \lambda_0/T) = T_{1°} (N_A k/c^2) = h\upsilon N_A/c^2 = 5.571080531 * 10^8 \text{ m}$$

The overall result of our physico-mathematical analysis is a wholly different quantum physics of electromagnetism and thermodynamics! Indeed, our discovery of the optothermal constant ($\lambda_0/T = k/c^2$) is utterly consequential since it results in the complete elimination, qua superfluous quantity, of Planck's second radiation constant [7-8]

$$c_2 = hc/k$$

that yielded a "kind" of wavelength of temperature which, at 1 °K, had the value of

$$\lambda_m = c_2/(4.965 \text{ T}) = 2.8978 * 10^{-3} \text{ m}$$

It sourced uncertainties in the absolute temperature scale that are exacerbated at ultra-low-cryo temperatures, in transition states, in the determination of the mCBR, and in the "measurement" of "ultra-high" temperatures in current thermonuclear fusion devices. All these errors are caused by quantum-statistical determinations that fail to identify the real photon path-wavelength of interest in any manifestation of temperature:

$$\lambda_0 = kT/c^2$$

For a physics that claims to be one of electromagnetism, this omission proves to be a wrecking ball.

2. The myth of the direct conversion of temperature into electronvolts

How then do physics textbooks, online converters and physics papers all embrace the absurdity of Callen's arbitrary choice? How is it that temperature can be converted into electronvolts directly? How did physics arrive at the preposterous equivalence of

$$1 \text{ eV} = 11{,}604.9 \text{ °K}$$

and without any hesitation?

The supposed equivalence is often given wrongly as 11,606 °K eV^{-1}. Either way, it is arrived at by a curious series of erroneous transliterations. The potential of 1 volt is chosen to form a product with the universal electric charge (the "electron") and then arbitrarily divided by Boltzmann's molal entropy constant. This is the "molecular way". The "macroscopic way" just employs Avogadro's number and the "gas constant" R; they are equivalent:

$$N_A\ (e^*V_{1v})/R = e^*V_{1v}/k$$

Whether treated conventionally or aetherometrically, the numerical result is basically the same irrespective of physical dimensions:

$e^*V_{1v}/k =\!\int\!= p_e\ W_{v1v}/k = 11{,}604.62$ *?with what dimensions?*

Now, if like Callen, we opt to *arbitrarily* attribute to temperature the dimensionality of energy and to k zero dimensions, then immediately

$$e^*V_{1v}/k =\!\int\!= p_e\ W_{v1v}/k = 11{,}604.62\ m^3\ sec^{-2} =\!\int\!= 0.012\ eV$$

which would be preposterous, since it would make the actual value of 1 eV, 83.14x smaller than it is:

$$e^*V_{1v} =\!\int\!= p_e\ W_{v1v} = (13.97017654\ m^2\ sec^{-1})(69{,}065.20829\ m\ sec^{-1}) =$$
$$= 964{,}853.1526\ m^3\ sec^{-2} =\!\int\!= 1\ eV$$

But if, as Aetherometry has proposed, the constant k has the correct dimensionality of

$$k = (L^3\ T^{-2})/°K =\!\int\!= (L^3\ T^{-2})/L = L^2\ T^{-2}$$

then it is easy to see that all which the conventional equation seems to indicate is that its result is

$$e^*V_{1v}/k =\!\int\!= p_e\ W_{v1v}/k = 11{,}604.62\ °K$$

That is, the unit ratio of 1 eV to k would give us the temperature of 1 eV. But it doesn't! Such a conclusion is, indeed, *quite wrong*. It is based on the *gratuitous supposition* that electrokinetic energy has a temperature. And it provides an incomplete equation for the expression of a physically meaningful result in degrees kelvin - resulting in a mirage of degrees.

Why would electrokinetic energy have a temperature? It is not a thermal or thermoelectric energy. The gratuitous conclusion is sheer proof that modern physics cannot yet reason functionally or aetherometrically. What the conclusion actually masks is the inability of physics to figure out, *from the value of the energy of a photon* in eV, *the electrokinetic energy of the massbound charge that emitted it*. Our work long ago demonstrated that if the photon emitter is an *electron*, the voltage potential of its kinetic energy is

$$V =\int= W_v = \alpha^{-2}\, h\upsilon/p_e = \alpha^{-2}\, kT/p_e$$

where α is the real fine structure constant (0.007215769) **[9-10]** and p_e is the universal charge constant expressed in the meter-second aetherometric system of units. The corresponding voltage (and just as well the energy in electronvolts) of the *resulting* optothermal photons, is:

$$W_{photon} = h\upsilon/[p_e\, (69{,}065.20829\ m\ sec^{-1}\ volt^{-1})] = kT/[p_e\, (69{,}065.20829\ m\ sec^{-1}\ volt^{-1})]$$

For example, an IR photon with temperature of 298°K, will have an energy of

$25.7\ meV =\int= 24{,}776.87\ m^3\ sec^{-2}$

or a voltage equivalence $W_{photon} = 25.7$ mV, and will have been emitted from an electron with a potential of

$493.4\ volts =\int= W_v = 3.406*10^7\ m\ sec^{-1}$

and thus 493.4 eV of kinetic energy:

$493.4\ eV =\int= p_e\, W_v = 4.7586*10^8\ m^3\ sec^{-2}$

So, we may say that the quantum energy of a photon has a strict electric equivalence:

$$p_e\, W_{photon} = h\upsilon$$

But since photons carry no electric charge, this equivalence is simply a function of the fact that each photon is emitted *from a single loop* of the electron mass-energy torus, which is the same as the product of the voltage W_v of the electrokinetic energy of the emitter by the square of the fine-structure constant:

$$\alpha^2\, W_v = W_{photon}$$

The analytical tools of the aetherometric method permitted us to *electrically* define photon temperature as a function of the potential of the kinetic energy ($p_e\, W_v$) of the electron that emitted the photon. But the method went much further, as it provided a second, and yet more essential, physical meaning of the voltage wave of a photon, W_{photon}, this time as the critical component of the dissipatory energy flux of a photon (i.e. the *third* wave) expressed as a function of a constant, the real Hartree Atomic Unit of Time [5, 11-12]:

$$W_{photon} = h\upsilon/p_e = kT/p_e = \lambda_0 \, \varepsilon_k$$

where the Hartree A.U. of Time is commensurate with the moment of inertia (aetherometrically given by $(\lambda_e \, \lambda_h \, \lambda_x)/4\pi^2$, or simply linearized to $(\lambda_e \, \lambda_h \, \lambda_x)$ [13-14]) of the electron rest energy [14-15]:

$$\tau_k = \upsilon_k^{-1} = \varepsilon_k^{-1} = (W_k/\lambda_h)^{-1} = (\lambda_e \, \lambda_h)/p_e = (\lambda_e \, \lambda_h \, \lambda_x)/h = 1.554391771*10^{-16} \text{ sec}$$

This was another major mathematical correction made by Aetherometry to modern physics (to the Hartree A.U. of Time). Indeed, since ε_k is a universal constant for all optothermal photons, all that can vary in their flux of energy is λ_0, the latter being the actual micrological aspect of temperature:

$$\lambda_0 = kT/(p_e \, \varepsilon_k)$$

Thus, the real electromagnetic (photon) functions of temperature are

$$T = h\upsilon/k = \lambda_0 \, c^2/k = (p_e \, W_v/\alpha^{-2})/k = p_e \, W_{photon}/k$$

Accordingly, the conventional expression
$e^*V_{1v}/k = 11{,}604.62$ °K
gives neither the temperature equivalence of the electrokinetic energy of an electron, nor the correct temperature of any optothermal photon emitted from an electron. The correct expression for the latter is

$$e^*V_{1v}/(\alpha^{-2} \, k) =\!\int\!= p_e \, W_{v1v}/(\alpha^{-2} \, k) = 0.64221 \text{ °K}$$

so that this is the *virtual* temperature of the 1 eV electrokinetic energy of an electron. If this electrokinetic energy were to dissipate into electromagnetic heat, it would produce a number of photons equal to α^{-2}:

$$p_e\, W_{v1v} = \alpha^{-2}\, h\upsilon = \alpha^{-2}\, kT = \alpha^{-2}\, k\, (0.64221\ {}^{\circ}K)$$

i.e. ~19,206 photons, each with a 0.6 °K temperature, rather than the 1 eV electrokinetic energy of an electron having a temperature of

$$\alpha^{-2}\, (0.64221\ {}^{\circ}K) = 11{,}604.62\ {}^{\circ}K$$

Actual temperature is an unsuspected molal function, not the product of a dimensionless number (be it a constant) by a temperature. In effect, both electrodynamics and thermodynamics got it wrong! The consequences have proven tragic and laughable at once, as we shall see below.

3. The voltage proportionality of the absolute temperature scale

Thus, it is clear that the physical meaning of the ratio (kT/p_e) is not that electric charge is a property of photons. Rather, that ratio is merely a consequence of individual photons being emitted from single loops of the electron torus - the total number of loops being equal to α^{-2}:

$$p_e\, W_v = \alpha^{-2}\, p_e\, W_{photon} = \alpha^{-2}\, kT$$

This fundamental photon-emission process is apparent even in the determination of the molar *heats of state*, and their "molecular" expression. Consider a gas phase: the translational velocity of the modal free electrons of state that generate the modal photons of state [2] is a function of electric charge, as per

$$v_{TL\_1^{\circ}e} = \sqrt{(\alpha^{-2}\, kT/\lambda_e)} = \sqrt{(\alpha^{-2}\, kT/p_e)}\, \sqrt{(W_k)}$$

Indeed, the term $(\alpha^{-2}\, kT/p_e)$ simply denotes the voltage-equivalent wavespeed of the kinetic energy of these electrons

$$(\alpha^{-2}\ kT/p_e) = W_v = \int = V$$

- such that their velocity of translation is:

$$v_{TL\_1°e} = \sqrt{(W_v)}\ \sqrt{(W_k)}$$

Thus, (kT/p_e) is a wavespeed quantity with a single variable, which is temperature T, that is simply equivalent to the voltage potential of a single photon -

$$W_{photon} = (kT/p_e) = W_v/\alpha^{-2} = h\upsilon/p_e$$

- that is, to the division of the variable voltage wave of the kinetic energy of an electron by the square of the reciprocal of the fine-structure constant. Lastly, in this respect, we note that voltage-equivalence of a photon has still a fourth expression that directly involves both the Duane-Hunt wavelength $(\lambda_x = \lambda_e/\alpha^{-2})$ of each electroinertial loop of the torus and the quantum frequency of the emitted photon

$$W_{photon} = (h\upsilon/c^2)(c^2/p_e) = \lambda_x\ \upsilon = h\upsilon/p_e$$

so that the full set of relations results:

$$W_{photon} = \lambda_x\ \upsilon = h\upsilon/p_e = kT/p_e = \lambda_0\ \varepsilon_k$$

Accordingly, the photon temperature T is what, causatively, is made to vary in parallel with the voltage or potential of the electrokinetic energy of a massbound charge, so that, for electrons, we may state unequivocally that

$$T = (p_e\ W_v)/(\alpha^{-2}\ k)$$

Evidently, the simplest function for the absolute temperature scale is given by its proportionality to voltage alone (and thus to electrokinetic energy), since charge, alpha and k are all constants. This is a strict aetherometric discovery. In effect, the (V/T) function that Kondepudi & Prigogine invoked as "the force of the conduction current" (which it is not!) in their analysis of ohmic heat [16], is *an electron constant* of nature - an electro-thermal frequency quantity, if you will:

$$V/T \ {=}\!\int\!{=}\ W_v/T = (\alpha^{-2}\ k)/p_e = (\alpha^{-2}\ k)/(\lambda_e W_k) =$$
$$= 1.143044492 {*} 10^{5}\ \mathrm{m\ sec^{-1}\ {}^{\circ}K^{-1}} = 2.051746489 {*} 10^{-4}\ \mathrm{sec}^{-1} =$$
$$= (4.873896486 {*} 10^{3}\ \mathrm{sec})^{-1} = \mathit{T}^{-1}$$

However, one cannot simply generalize these electron-photon relations to other massbound charges. If one is considering single massbound charges, all of them with greater masses than that of the electron (for example, a proton or a muon), the factor α^{-2} will have to be multiplied by the positive ratio of the respective masses. But when it comes to molecules or molecular ions, that is not the method. For example, to express any particular temperature as a function of the diffusion of a gas molecule or ion, what matters is to know the proportionality between the electrokinetic energy of the modal free electrons of state and the translational energy of the diffusing gas or ion *at the same particular temperature*:

$$E_{KE1^{\circ}e}/E_{TL\_gas} = (\lambda_e\ W_k\ W_v)/(\lambda_n\ v_{TL\_gas}{}^2)$$

Then, that particular temperature correctly results

$$T = (\mu_{gas}\ 2\pi d_{free}\ \mathcal{D}_{gas})/k = (E_{KE1^{\circ}e}/E_{TL\_gas})\ (\lambda_n\ v_{TL\_gas}{}^2)/(\alpha^{-2}\ k) =$$
$$= (\lambda_e\ W_k\ W_{v1^{\circ}e})/(\alpha^{-2}\ k)$$

where μ_{gas} is the gas or ion density; d_{free} the unit-length of the free volume of the Space-manifold at T and a defined pressure; and $\mathcal{D}_{gas}$ the diffusion coefficient of the gas or ion. What, then, phenomenologically reduces the value of α^{-2} for the gas determination is its division by the energy proportionality ($E_{KE1^{\circ}e}/E_{TL\_gas}$). In effect, the correct temperature function is always the result of the differential of the voltage of the translational energy of the gas or ion, toward the voltage of the modal free electrons that are ultimately responsible for the electromagnetic effect of temperature:

$$T = (W_{v1°e}/W_{v\_gas})(\lambda_n v_{TL\_gas}^2)/(\alpha^{-2} k) =$$
$$= (W_{v1°e}/W_{v\_gas})(p_e W_{v\_gas})/(\alpha^{-2} k) = (p_e W_{v1°e})/(\alpha^{-2} k)$$

Note that these are strict "molecular" or micro expressions. But being ultimately a molar measure [2], the temperature function can be expressed as a molal quantity:

$$T = N_A (W_{v1°e}/W_{v\_gas})(\lambda_n v_{TL\_gas}^2)/(\alpha^{-2} R) =$$
$$= N_A (W_{v1°e}/W_{v\_gas})(p_e W_{v\_gas})/(\alpha^{-2} R) = N_A (p_e W_{v1°e})/(\alpha^{-2} R)$$

Discussion

1. Far-reaching implications for thermodynamics and physics

We have written an entire treatise (see volume VI of our AToS) on the far-reaching implications of our novel theory of temperature, in particular for a capable theory of entropy, so there is hardly a point in reiterating them here. But two major ones must be cited.

First, the aetherometric method proves that there is an absolute temperature scale which is entirely proportional to (optothermal) electromagnetic energy and to voltage. This should put an end to the high-end and low-end skewings of the temperature scale that have resulted from incorrect application of so-called quantum-mechanics and wave-mechanics. In the preceding, we pinpointed the major errors that are foundational to modern thermodynamics.

Second, existing physics remains in grave error regarding the temperature of the electron-derived microwave cosmic background radiation (mCBR). No matter whether we take Penzias and Wilson's original 4.08 GHz band, or the frequency of the Planck blackbody distribution mode at 3.861 GHz, the conventional modal mCBR temperature of 2.73°K is wrong. This is easy to see with our method"

$T = h\ (4.08\ \text{GHz})/k = 0.1958\ °K$

$T = h\ (3.861\ \text{GHz})/k = 0.1853\ °K$

Little wonder cryogenics is plagued with problems and insufficient theories, but so is astrophysics.

2. Implications for the thermometry of thermonuclear fusion reactors

Largely because of the ridiculously massive, socially-engineered pressure to develop so-called AI systems, electrical power grids all over the world have been overtaxed with demand. In the past year (2025), this led to a concerted push all over the planet to bring the promise of thermonuclear fusion to fruition. Uncounted zillions of public money have been spent since WWII in trying to prove the incorrect axioms of nuclear physics - that thermonuclear fusion is real, and that it can be sustained. The reported Tokamak breakthroughs [17-19] (from China's EAST reactor and France's WEST reactor) focused on how long the plasma could be sustained with stronger confinement techniques, and on how ultra-high temperatures were "finally achieved" that *matched the theoretically predicted requirement*s for a "density-free" regime (when thermonuclear power would scale with the square of the density of the D-T plasma). Remarkably, not a single report demonstrated power generation - i.e. energy release in excess of breakeven. In other words - no sign of hydrogen fusion or the fabled "thermonuclear power"... It appears to be just another market cycle of the same old. But let us succinctly see what the implications are for the current thermonuclear efforts, of the preceding systematic corrections to thermodynamics and electrodynamics.

Both EAST and WEST reactors reported temperatures on the order of 150 to 180 million degrees kelvin. The injected energy required to sustain the plasmas - generally for about 20 minutes - was estimated at 13 to 13.6 keV. Thus, by the deficient logic which the present communication debunks, we have the terrific claim of ultra-high temperatures having been achieved:

$$(13{,}600\ \text{eV})(11{,}604.62\ ^{\circ}\text{K eV}^{-1}) = 157.82\ \text{million degrees kelvin}$$

It sounds amazing! However, by the strict analysis presented here, the temperature of the photons emitted by the electron component of the plasmas is rather less -

$$\begin{aligned} T &= (p_e\, W_v)/(\alpha^{-2}\, k) = \\ &= (13.97017654\ \text{m}^2\ \text{sec}^{-1})\ [(13{,}600\ \text{V})(69{,}065.20829\ \text{m sec}^{-1}\ \text{V}^{-1})]/(\alpha^{-2}\, k) = \\ &= 8{,}217.41\ ^{\circ}\text{K} \end{aligned}$$

A puny 8,000 degrees kelvin! Not even as high as the temperature of the solar photosphere, which, though wrongly estimated by conventional physics at 5,000 to 6,000 °K, actually is:

$$T = (p_e W_v)/(\alpha^{-2} k) =$$
$$= (13.97017654 \text{ m}^2 \text{ sec}^{-1}) [(51{,}000 \text{ V})(69{,}065.20829 \text{ m sec}^{-1} \text{ V}^{-1})]/(\alpha^{-2} k) =$$
$$= 30{,}815.3 \text{ °K}$$

The implications are rather disastrous. Even if thermonuclear fusion theory were not wrong about the actual fusion process, anyone with half a brain could probably conclude that with such a temperature error there is little chance that thermonuclear fusion can ever be brought to fruition.

Now add to this fact what our own work [20-22] has demonstrated is the cardinal error of thermonuclear fusion theory - and one gets the picture of a complete failure and waste of the entire endeavour: the fusion reaction in the core of the Sun is not confined inertially or magnetically, nor driven by thermal power or avalanches of electromagnetic energy, but confined gravitationally and driven electrodynamically in the absence of any input heat, and without heat or light output signatures. That means that while the solar photosphere and corona present a temperature because of their optothermal photon production, the highly-ordered core of the star where fusion takes place has literally no temperature, since it lacks photon production, period. *Ergo*, the desired output of a sustained nuclear fusion reaction will not be heat, but electric energy in both massfree and massbound forms.

If our work is correct, physicists are barking up the wrong trees. Further, their reliance on the operation of those hyper-glorified computers called AI, will only make the fusion problem unsolvable: of what use is to automate machine "intelligence", if the automation program and programmers have the wrong intelligence, the wrong program? AI cannot devise Aetherometry on its own, it needs to be programmed to do that. It cannot even prove any error in aetherometric mathematics, which has by now become a rather comprehensive or "unitarian" physical, chemical and biological theory. AI can do neither for the simple reason that its programmers, amongst which are top conventional physicists, can do neither. Hence the persistent refusal of physics journals over two decades to "peer-review" any submittal of our work [23]. They are afraid to collectively look stupid. Well, the gauntlet is now thrown on their ground.

References

1. Callen HB (1960, 1985 rev.ed.) "Thermodynamics and an introduction to Thermostatistics", J. Wiley & Sons, NY, NY.

2. Correa PN, Correa AN & Askanas M (2025) "Phase treatment of thermokinetic and electromagnetic heats", Volume VI of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-VI.7.

3. Correa PN & Correa AN (2000) "The cosmic background microwave radiation as evidence for cosmological creation of electrons with minimum kinetic energy and for a minimum of cosmic ambipolar massfree energy", Akronos Publishing, Concord, ON, Canada, ABRI monograph AS2-17C.

4. Correa PN, Correa AN & Askanas M (2024) "Entropies of state and of transfer, and the functions of the calorimeter: a different granulation of heat", Volume VI of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-VI.3.

5. Correa PN & Correa AN (2012) "What is a photon? And how and why are photons massless?", J Aetherom Res, 2(9):1-30.

6. Correa PN & Correa AN (2024) "Experimental Confirmation of the Aetherometric Theory of Temperature and the Conversion Equivalence of Electric and Thermal Energies", J Aetherom Res, 3(6):1-9.

7. Correa PN & Correa AN (2026) "The errors of quantum theories and radiation laws: cosmic radiation(s), electron emission and the temperatures of electrons in metals", Volume IV of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-IV.1.

8. Swindels JF (1967) "Thermometry and pyrometry", in Handbook of Physics, Ed. by E.U. Condon & H. Odishaw, McGraw-Hill Book Co., NY, NY, p. 5-36.

9. Correa PN & Correa AN (2009) "On the determination and value of the fine structure constant", J Aetherom Res, 2(5):1-17.

10. Correa PN & Correa AN (2011) "Alpha - the fine structure constant and the hydrogen spectrum", Volume III of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-III.5.

11. Correa PN & Correa AN (2012) "The Hartree energy of hydrogen and the impedance of the 'Vacuum'", Volume III of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-III.6.

12. Correa PN & Correa AN (2026) "Evidence for a universal Time: photon dissipation and the cosmic energy lattice flux", J Aetherom Res, 4, 10:1-11.

13. Correa PN & Correa AN (2003, 2004) "The Gravitational Aether, Part II: Gravitational Aetherometry (2), Mysteries of Inertia", Volume II of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-II.4.

14. Correa PN & Correa AN (2011) "The electron mass-energy as a deformable nanometric torus - fine and hyperfine structures and flux topogeometries", Volume III of the Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, Canada, ABRI monograph AS3-III.

15. Correa PN & Correa AN (2026) "Synchronism of the lepton mass-energy with the cosmic lattice", Volume IV of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-IV.2.

16. Kondepudi D & Prigogine I (1998) "Modern Thermodynamics - from heat engines to dissipative structures", J. Wiley & Sons, NY, NY.

17. Collins S (2025) "China’s ‘artificial sun’ shatters nuclear fusion record by generating steady loop of plasma for 1,000 seconds", Eurasia Business News, January 26.

18. Ning Y (2026) "EAST Tokamak experiments exceed plasma density limit, offering new approach to fusion ignition", Hefei Institutes of Physical Science, Chinese Academy of Sciences, January 4.

19. Allen V (2025) "Nuclear fusion breakthrough: 'artificial Sun' reactors sets a new world record by generating a steady loop of plasma for 1,337 seconds - taking the world closer towards limitless clean energy", Dailymail.com, February 19.

20. Correa PN & Correa AN (2023) "Sunspots and the internal structure of the Sun: a little lesson in nuclear physics and photochemistry", Volume VII of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-VII.5.

21. Correa PN & Correa AN (2023) "The evolutions of stars and the secrets of nuclear fusion", Volume VII of Aetherometric Theory of Synchronicity (AToS), Akronos Publishing, Concord, ON, Canada, ABRI monograph AS3-VII.10.

22. Correa PN & Correa AN (2025) "Critical appraisal of XXIst century energy science and technology (3): nuclear fusion, LENR and anomalous plasma electrodynamics", J Aetherom Res, 5, 1:1-84.

23. Correa PN (2026) "Can science be trusted? A test of peer-review in physics journals", J Aetherom Res, 11, 1:1-40.