Revealing the Phenomena of Heat and Photon Energy on Dealing Matter at Atomic level

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Abstract – Technology is in the way to reach in its climax but the basic understanding of science in many phenomena is still awaited even though the nature witnesses to them in many ways. Again, scientific research reveals strong analogy between photon and electron. When silicon atom deals neutral state of certain electron of the outer ring under the adjustment of companion ones, that electron levitates from clamping energy knot to opposite side of ground point attained by its atom where a bit-energy is placed along the configuring trajectory. Gravitation behavior of that electron starts at the central point of its relaxation state by introducing force of side-pole where it terminated the force of opposite side-pole resulting into pulling it under the force of gravity introduced by observing downward unfilled state where another bit-energy is placed along the configured trajectory, thus, depicts the forcing energy shape like Gaussian distribution symbol with both ends turned called unit-photon. The auxiliary moment of inertia is being involved at each stage of turning that electron introducing pair of disappearances of forces against pair of appearances of opposite forces during rest to motion and motion to rest in the first half-cycle. The same is the case for second half-cycle but electron-dynamics are under the forces, opposite in description. However, at stage of steady-state levitating and gravitating electron, mainly one force is being involved at one time where the opposite force is disappeared. The uninterrupted inter-state electron-dynamics of atom under the availability of several bits of bit-energy results into transform them into forcing energy shape like a wave that can travel immeasurable length and unavailability of bit-energy at any stage interrupted electron-dynamics resulting into give an overt photon. Two bits of bit-energy are placed along the configuring trajectory during each forward- and reverse-direction cycle of electron. Inter-
state dependent but path-independent forces are being involved to configure forcing energy of uninterrupted cycles where moment of inertia is only for recalling at each turning point of electron as it doesn’t have contact to clamping energy knot in either state, so, conservative forces are involved in transforming heat energy into photon energy where distance doesn’t matter. Minimum two cycles of inter-state electron-dynamics formulate an overt photon – a photon length twice to unit-photon. Under certain interaction of unit-photon, it divides equally in two bits of bit-energy instead of dividing in tits and bits of heat. The mechanism of transforming heat energy into photon by silicon atom validates that atomic structure of various elements is in different manner to the presented one. An isolated electron is being grounded under directed forcing energy to impinge an atom of certain transition state where gained instantaneous velocity under merged energy distort atom at point of strike. Matter changes the role of energy and force under various sorts of interactions. Here, heat energy and photon energy explore matter at atomic and electron levels, thus, devise basis of science to describe.

**Keywords:** Heat energy; Photon energy; Fundamental forces; Electron-dynamics; Atomic Scale Phenomenon; Neutral electron state

**INTRODUCTION:**
Creature is benefiting by heat energy and photon energy since the existence. Electrical phenomena have been also studied since long. Catching fire in various stuffs is one of the usual phenomena known since the existence of life. Everyone is taking the benefit of these blessings but the understanding behind these phenomena is not only clear but their dealings to various sorts of matters are also unclear.

Many studies are available in the literature dealing with light-matter interaction and it has been covered largely under a phenomenon, namely, surface plasmons. Origin of plasmons was explored in some early published reports [1-4]. A plasmon is a quantum of plasma oscillation and represents the collective oscillations of the free electron gas density – a general definition extracted from the literature.
The interaction of light (photon) to matter is recognized in the form of various terminologies, namely, phonon, excitons, and plasmon, etc. Recently published review discusses the light-matter interaction by considering the properties of polaritons modes in two-dimensional materials and applications in the certain range of spectrum [5]. The concept of excitons (electron-hole pairs) was first proposed by Frenkel [6]. It deals with the excited state of an atom in a lattice travelling in particle-like fashion without net transfer of charge. Excitons can be formed on absorption of photon by a semiconductor (quantum dot) [7]; a phonon is a collective excitation in a periodic, elastic arrangement of atoms or molecules in condensed matter.

A vast number of studies deal the formation process of tiny particles. The tiny-sized cluster is a simple chemical compound which has a variety of important applications in diversified areas [8]. The unique nature of nanocrystals solicits the fabrication of new materials of controlled features [9]. The likely development of nanoparticles technology is an obvious long-term benefit [10]. With the success of assembling colloidal matter in a useful structure, the atoms and molecules will be treated as materials for tomorrow [11]. The investigation of the dynamics of an individual nanoparticle should be taken as a prime concern prior to go for further solid deliberations [12]. A good understanding on the surface features of nanoparticles will lead the development of high order materials [13]. Tiny-sized clusters possess molecular-like electronic structures and non-fcc geometric structures [14]. Chemical properties of gold nanoparticles change with size [15]. The development process of various tiny particles of gold under varying conditions of their processing has been discussed elsewhere [16]. It has been discussed that localized dynamics of the process is one of the cause that helps to evolve the structure of tiny particles in gold [16-20], silver [20], and carbon [21, 22]. The study of tiny shaped particle dealing elongation of atoms of one-dimensional arrays is discussed elsewhere [23]. When the stretching of clamping energy knots to electrons in an atom is orientational-based, it is said to be the elongation of that atom, which is under the force of surface format working along opposite poles of that atom in the uniform manner from the centre and when that force is working in non-uniform manner from the centre of that atom, it is said to be the deformation of atom [24].
Sir Isaac Newton explained the gravity, called Newtonian Physics. There is no such concept of the opposite of gravity in the Theory of General Relativity as explained by Sir Albert Einstein. Bohr proposed that electrons move around the nucleus in allocated orbits where they have fixed energy if atom is in ground state. Therefore, the behavior of levitation, neutral state and gravitation dealt by the electrons of atoms of various nature remains beyond the understandings, and the concept of band gap, valence band and conduction band dominated all along through with shells and orbital configurations, thus, it was kept away to consider and think on force-energy directed phenomena dealing matter at all scale. A parallel study will discuss the inter-changeable force-energy behaviors of different nature atoms [25]. Huge efforts were applied in exploring technological advances and breakthroughs but the efforts that were put forth toward the basic and fundamental sciences along with continuity in the explored ones remained in less focus. Basis-structures of space format, surface format and grounded format in different dimension has been pinpointed in atoms possessing ground point just at ground surface, at ground surface and at below ground surface where their certain electron-dynamics invited energy to bind atoms [26]. Again, structural evolution of carbon in different state atoms involved frictional forces to invite binding energy [27].

In this work, the phenomena of heat energy and photon energy is discussed by considering the silicon atom while at neutral state of its certain electron where a bit-energy placed along the configuring trajectory of electron while in levitation behavior and a bit-energy placed along the configuring trajectory of electron while in gravitation behavior, thus, transforming the heat energy (bits of bit-energy) into unit-photon under one cycle of inter-state dynamics. Here, charisma of an atom transforming bits of bit-energy into photon energy under inter-state electron-dynamics is discussed. Silicon atom is considered as a model system when dealing neutral state of electron in outer ring. The analogy between photon and electron is also explained here.

RESULTS AND DISCUSSION:
Under the propagation of exceeded level photons characteristic current through inter-state electron gap of inert gas atoms flowing at certain rate, they split into electron
streams where their electrons of carrying forcing energy can be utilized to deform atoms or further elongate to elongated atoms depending on the mechanism of impingement as discussed elsewhere [24]. If the impinging of electron streams to underlying atoms is not in accordance with their certain transition state, the stretching of electron states remains non-orientational-based resulting into deform atoms. The deformed atoms don’t modify their structure to structure of smooth elements even under the inward pressing of travelling photons of adequate energy along both sides of their surface. The travelling photons don’t align perturbed electrons of those deformed atoms because of non-orientational-based stretching of their clamping energy knots. A tiny shaped particle of gold atoms dealing localized gravity at solution surface was taken as a model system to explain the mechanism of their elongation along with transformation of one-dimensional arrays of atoms into structure of smooth elements, which is discussed elsewhere [23].

Those studies enlighten us that heat energy is to be placed along the configuring trajectory of electron when dealing conservative force where it doesn’t possess any sort of contact, thus, dealing inter-state dynamics under non-frictional forces while remaining inside the dedicated states of its atom. When uninterrupted inter-state electron-dynamics of the atom executed, transformed heat energy into photon energy is to be behaved like forcing energy capable of propagating from one point to another through medium of inter-state electron gap called photonic current or capable of travelling from one point to another through medium of normal environment where decreasing energy and increasing wavelength is to be dealt. Further details regarding photonic current is given elsewhere [24]. The word propagation is termed when ‘forcing energy’ is dealing the inter-state electron gap of atoms of various elements while the word travelling is termed when ‘forcing energy’ is dealing the medium other than inter-state electron gap. Thus, the smallest entity which can deal the force and energy together, both in its travelling or propagating mode, is related to unit-photon. The atoms of solid behavior near ground surface which deal neutral state of their electrons, they are to be capable to transform heat energy into photon energy under admissible of inter-state electron-dynamics. A one cycle inter-state electron-dynamics of suitable atom results into is given forcing energy in the smallest amount, which is to be the smallest entity of photon
energy. Thus, the unit-photon owns the smallest entity of photon energy. Thus, the unit-photon possess shape like ‘Gaussian distribution symbol with both ends turned upward’ and in the case of inverted unit-photon shape like ‘inverted Gaussian distribution symbol with both ends turned downward’ as shown in (1) of Figure 1. Interaction of unit-photon under suitable scheme to certain medium results into its division into two equal parts (shape like integral symbol and shape like opposite integral symbol), which is called a bit-energy in both cases as shown in (2) and (3) of Figure 1, respectively. Each one of them is being placed along the configuring trajectory of inter-state electron-dynamics in certain atom of neutral state electron as discussed, below, in forthcoming paragraphs. The heat energy is generated when a photon of certain length even the ‘unit-photon’ is being divided under the interaction of certain medium. On interaction of unit-photon under certain scheme to solid medium like grounded electron where instead of division, it deals merged energy as shown in (4) of Figure 1, which is a bunch of heat and can be termed as phonon. On interaction of unit-photon to certain medium where instead of dividing into two parts or transforming into merged energy, they divide into several parts or already divided two parts further divide into parts, they are also related to heat energy. But, in the divided unit-photon where made tits and bits involved the region dealing node or antinode, they yet possess the element of force due to the involving of their turned regions. Nevertheless, in the case where the arms of unit-photon neither compressed nor divided into two parts while undertaking interaction (s) to certain medium, it divided into several parts as shown in (5) of Figure 1 and they are related to tits and bits of heat, which is also heat energy.

Figure 1: (1) The smallest entity of forcing energy shape like Gaussian distribution symbol with both ends turned called unit-photon, division of unit-photon in shape like (2) integral symbol and (3) opposite integral symbol, (4) merge energy of unit-photon and (5) division of unit-photon into tits and bits of heat.
On interacting photons of longer wavelengths to water, they raise the temperature of the water at larger volume but under less degree of hotness and vice versa. Similarly, long length photon (overt photon) carries more energy as compared to the one termed unit-photon. The heat is resulted under the different sorts of interaction of photons to suitable medium where they deal the energy locally; the element of force is diminished to a large extent because of the broken regions belonging to nodes and antinodes. The heat is being absorbed and dissipated in the medium like water or solutions of different composition or other suitable mediums not working as an insulator resulting into raise the temperature. The term ‘partially propagate’ can be employed as the divided pieces of unit-photon are not completely still, and their broken regions related to inertial property of the electron are still in the propagation mode to inter-state electron gap of water molecules and associated containments (components) where in addition to conduct heat, the medium also starts conducting the current. Due to that phenomenon, a body often faces the electric shock, a shock which is due to photonic current, on connection of wire to liquid medium dealing the propagation of photonic current.

A photon characteristic current, in any length, propagates in inter-state electron gap of atoms as they contain both width and length of gap within the amplitude and wavelength of that photon [24]. However, it is observable that the burst or damage of copper or steel wire in the case of halting propagation of photons characteristic current was either due to distorted (out of order) inter-state electron gap or exceeded density propagation of photons. The length of photon depends on the number of cycles counting at the point of generating source until the interruption takes place. If the confined electron-dynamics remain operational and consistent while retaining within inter-state gap, it remains uninterrupted resulting into generate forcing energy under each connecting cycle shape like a wave as shown in (1) of Figure 2; it is also called an overt photon where the inter-state electron-dynamics configured forcing energy after the execution of six cycles (three in the forward-direction cycles and three in the reverse-direction cycles). Under appropriate coinciding to a medium, an overt photon is converted into different numbers of bit-energy depending on the length of overt photon where each connected unit-photon divided into two bits of bit-energy. The overt photon
is the multiple of a unit-photon as shown in (1) of Figure 2. Due to its interaction to medium, it is converted into several bits of bit-energy. When it was interacted to medium where angle of its straight line travelling and angle of the medium at level of ground surface to which it interacted is the same as shown in (2) of Figure 2, it divided into twelve bits of bit-energy as shown in (3) of Figure 2. Such bits of bit-energy are being absorbed by the silicon atoms on their entering through the laminated glass surface, thus, working again as photon energy as discussed below. On the other hand, when it was interacted normal to plane (surface of the suitable medium) as shown in (4) of Figure (4), it divided into tits and bits as shown in (5) of Figure 2. However, as discussed in the case of Figure 1, bit-energy further divides into tits and bits of heat if it is not timely utilized. It can be deduced that an overt photon where several unit photons combined, on dividing further under miscellaneous interactions, it converts into tits bits of heat where they contain scattered energy dissipating into the medium. The smallest overt photon contained forcing energy of at least two unit-photons. Thus, it involves minimum two nodes and two antinodes.

**Figure 2:** (1) An overt photon configured from the heat energy under the trajectory of three forward-direction and three reverse-direction uninterrupted cycles of inter-state electron-dynamics, (2) interaction of overt photon to suitable glass medium when angle in space is equal to the angle of glass plane w.r.t. level ground surface, (3) several bits of bit-energy resulted when incidence angle of overt photon is the same to made glass surface at level ground surface, (4) perpendicular interaction of overt photon to the
horizontal surface of certain medium at level ground surface and (5) several bits and bits of heat resulted on interacting perpendicular overt photon to horizontal surface of certain medium level of ground surface.

In the case of bits of bit-energy, if they don’t divide further under the compression of medium, they become the complete recipe of a levitating electron at its start to at its end when it shapes like opposite integral symbol. But, on placement of bit-energy along configured trajectory of levitated period of electron, its shape looks like integral symbol. On connecting another bit-energy at center point of relaxation state while configuring trajectory of that electron in gravitating period resulting into generate a unit-photon shape like ‘Gaussian distribution symbol with both ends turned’. When neutral state electron of silicon atom deals inter-state electron-dynamics, the relevant electron is being levitated south to north while starting the motion against its moment of inertia and ending the motion against its moment of inertia where bit-energy is being placed along its configuring trajectory. A top left-side electron of the silicon atom when dealing the neutral state is shown in Figure 3 (a) along with direction of poles in its atom. A neutral state of the electron is just prior to its re-crystallization state as discussed elsewhere [25]. In this context, each electron of the silicon atom while at neutral state deals and undertakes its own force without contacting to its clamping energy knot in either of the state. In Figure 3 (a), electron of filled state at top left-side of silicon atom experiences levitation behavior where a bit-energy is placed from the surface of front side resulting into the disappearances of paired forces (north west forces), as a result, that electron leaves the state being clamped by its energy knot under the appearances of paired forces (south east forces). At centre of silicon atom, no force is influencing due to non-availability of mass (matter) of electron. A centre of silicon atom is a centre of its nucleus, which works as ground point of the atom along with other electrons of first ring, thus, allowing the targeted electron to levitate from its clamping energy knot where it was just on hold having no contact to energy knot.

In Figure 3 (b), a transformation of heat energy into unit-photon is shown where, at the central point of relaxation state, a bit-energy placed along the configured trajectory of the electron is ending when the ended moment of inertia of levitated electron is observed but at the same point another bit-energy is being placed which is ending when the ended moment of inertia of gravitated electron is observed. This unit-photon is the
forcing energy resulted from one forward-direction cycle of inter-state electron-dynamics where the energy placed along the trajectory of electron was mainly due to steady-state levitation behavior in first half-cycle. In gravitation of an electron from the central point of relaxation state, the energy placed along the trajectory of electron was mainly due to steady-state gravitation behavior in the second half-cycle. That electron included its moment of inertia at the start, in between the trajectory of steady-state levitation behavior and steady-state gravitation behavior, and prior to come at rest. This is a complete cycle of inter-state electron-dynamics in forward-direction (in Figure 3b). A levitated electron under steady-state behavior on dealing inertia where the force of south-pole mainly remains operational is shown at left-side in Figure 3 (b). At the point of starting controlled ejection of electron from clamped energy knot and prior to deal steady-state levitation behavior, the energy being placed along configured trajectory of electron is due to its moment of inertia. Therefore, a bit-energy entered from the front surface of the atom is mainly placed at rear side surface along configuring trajectory of levitating electron and only a small portion of energy is placed along the trajectory configured due to its auxiliary moment of inertia. Another bit-energy is being entered from the rear side surface of central point of relaxation state in Figure 3 (b) where it connected to the already placed bit-energy along configured trajectory of electron in first half-cycle. However, that bit-energy entered from the rear side surface of the atom is mainly placed at front surface along configured trajectory of gravitating electron and only a small portion is placed along centre edge of rear side surface (in Figure 3b).

The energy configured along the trajectory where electron changed the state (rest to motion or motion to rest) was mainly due to its auxiliary moment of inertia while the energy configured under the trajectory in steady-state behaviors of electron was mainly due to its levitation and gravitation behaviors. The process of inter-state electron-dynamics in neutral state electron atom on completing six cycles (three in the forward-direction and three in the reverse-direction) shaped the twelve bits of bit-energy like a wave where six of them have the shape like opposite integral symbol and six of them have the shape like integral symbol as shown in Figure 3 (c). Entering of bit-energy from the front side but mainly placing along the rear side following by the entering of another
bit-energy from the rear side of relaxation state but mainly placing along the front side during forward-direction cycle and vice versa for reverse-direction cycle resulting into propagate (or travel) itself in straight line by terminating connection from its electron if it stops executing inter-state dynamics. This is a forcing energy which is related to photon energy, which is configured by the inter-state dynamics of neutral state silicon atom. Because of long length of this photon as compared to unit-photon, it is termed as overt photon. The generating forcing energy interrupted at certain point, a new forcing energy of photon starts generating. The same process takes place in many atoms which results in generating photonic current under some additional modification required for a silicon solar cell. Each cycle of inter-state electron-dynamics generates forcing energy of unit-photon shape like ‘Gaussian distribution symbol with both ends turned’ where two bits of bit-energy is being placed along the configured trajectory. The continuous supply of bit-energy to electron will increase the length of forcing energy; hence, longer length of overt photon is resulted on interruption. Generating forcing energy propagates to in-contact medium without interruption till restoring state of the electron.

Figure 3: (a) silicon atom of neutral state electron, ground point and nucleus, (b) inter-state electron-dynamics for forward-direction cycle and (c) generating overt photon under forcing energy of six inter-state electron-dynamics cycles where total twelve bits of bit-energy utilized

When attained ground point of the silicon atom is at its front side (in Figure 3a), the placed bit-energy is also from the front side as the targeted electron of neutral state levitated from the rear side where dealing perfectly dictated forces at each point of turning in first-half forward-direction cycle. When that electron turns from the central point of relaxation state, the placed bit-energy is from the rear side as that electron deals gravity under the pulling force of downward unfilled state from the front side where
dealing perfectly dictated forces at each point of turning in second-half forward-direction cycle. This inter-state electron-dynamics for forward-direction cycle is shown in Figure 3 (b). When attained ground point of the silicon atom is at its rear side, the placed bit-energy is also from the rear side as the targeted electron of neutral state levitated from the front side where dealing perfectly dictated forces at each point of turning in first-half reverse-direction cycle. When that electron turns from the central point of relaxation state, the placed bit-energy is from the front side as that electron deals gravity under the pulling force of downward unfilled state from the rear side where dealing perfectly dictated forces at each point of turning in second-half reverse-direction cycle.

In the case where an electron doesn’t deal direct usage of the bit-energy, the heat energy of divided three portions of bit-energy can be employed along the trajectory resulting into form the bit-energy of first half-cycle and same is the case of bit-energy for the second half-cycle resulting into configure forcing energy of the unit-photon. The overall shape of placed energy along the configured trajectory of half-cycle during levitation period of electron is like integral symbol (\( \int \)). The overall shape of placed energy along the configured trajectory of half-cycle during gravitation period of electron is like opposite integral symbol. So, the placed energy in the two shapes of integral symbols along configured trajectory of electron dealing inter-state dynamics, opposite to each other, remained connected resulting into give the overall shape of placed energy shape like ‘Gaussian distribution symbol with both ends turned upward’ because, it is being transformed into forcing energy as shown in Figure 4 (a) – a unit-photon. The energy placed along the path where an electron is going to levitate while just be leaving its state having no contact is due to its auxiliary moment of inertia as it is reaching in the state of levitation behavior to central point of relaxation state – (1) to (2) in Figure 4 (a). In the time of levitating electron, the energy placed under the configured trajectory is due to steady-state levitation behavior – between (2) and (3) in Figure 4 (a). On turning the electron to go at central point of relaxation state, the energy placed is again due to auxiliary moment of inertia but by involving different forces – (3) ascending curved part to mid-position of the curve in Figure 4 (a). When the electron is turned into gravitation behavior, instead of relaxing at center point, energy places again due to auxiliary
moment of inertia – (4) descending curved part to mid-position of the curve in Figure 4 (a). During the gravitation of electron, the energy placed under its trajectory is due to steady-state gravitation behavior – between (4) and (5) in Figure 4 (a). The energy placed on reaching to original position of electron is again under the auxiliary moment of inertia where different forces are involved as compared to when started the journey as it changed the state from motion to rest (instead rest to motion)– (5) to (6) in Figure 4 (a). The regions of electron where auxiliary moment of inertia contributed are responsible to force energy at one point to another point. Therefore, at each point of turning electron, an auxiliary moment of inertia is being involved because that electron doesn’t involve any contact to state clamping energy knot while leaving and arriving to attempt each cycle, both in the case of forward-direction cycle and reverse-direction cycle. Thus, the force is remained path-independent instead of path-dependent in inter-state electron-dynamics of silicon atom. Electron doesn’t reveal any other process of re-gain.

**Figure 4:** (a) different regions of placed energy along configured trajectory of inter-state electron-dynamics of the silicon atom ground point at front side – front side (dark color) shows trajectory of electron and rear side (grey color) shows transformed heat energy into unit-photon and regions of disappearances and appearances of forces as per gauge of the electron-dynamics while in (b) forward-direction cycle (left to right) and (c) reverse-direction cycle (right to left).

The disappearances and appearances of forces of different regions of inter-state electron-dynamics while placing energy of unit-photon in forward-direction cycle (left-right in Figure 3a) is shown in Figure 4 (b). The disappearances and appearances of forces of different regions of inter-state electron-dynamics while placing energy of unit-photon in reverse-direction cycle (right to left in Figure 3a) is shown in Figure 4 (c). The
forces enabling the execution of electron-dynamics where inviting the energy as per
gauge in forward-direction cycle and reverse-direction cycle are opposite in description.
The motion to rest and rest to motion of the electron at central point of relaxation state is
due to the just termination of force at that point but its turning toward unfilled state is
due to the just initiation of opposite side force. The central point of relaxation state is the
point where one engaged force (either levity or gravity) is just disappeared and other
engaged force (either gravity or levity) is just appeared. At each auxiliary moment of
inertia of electron two equal and opposite forces act together, which cause that electron
to turn, so, there is coupling (in the configuring trajectory of electron following by the
placing energy along that trajectory). The moment of inertia is legible while steady-state
levitation behavior of the electron. Similarly, the moment of inertia is legible while
steady-state gravitation behavior of the electron. Nonetheless, the moment of inertia at
all stages of turning electron is remained auxiliary because electron doesn’t enable any
contact if in the hand of inter-state dynamics. Thus, inter-state electron motion keeps
continuing because of the absence of a force to change its regulated dynamics.

The element of levitational force influencing is responsible to execute dynamics of
neutral state electron south to north side at inertial to inertial point where a bit-energy
shape like integral symbol is placed along the configured trajectory (in Figure 3a). The
element of gravitational force influencing is responsible to execute dynamics of that
electron north to south side at inertial to inertial point where bit-energy shape like
opposite integral symbol is placed along the configured trajectory. Tits and bits of heat
other than bit-energy can also be placed along the configuring trajectory of electron if
they are restricted under the loop. Therefore, in a silicon lattice, inter-state electron-
dynamics of atoms deal direct placement of bit-energy along the configuring trajectory,
thus, generating photons characteristic current under a fast rate. The two unit-photon on
dividing into four bits of bit-energy will result into configure energy for one forward-
direction cycle and one reverse-direction cycle. It appears that atoms of many materials
are eligible to deal this bit-energy if they succeed in maintaining the neutral state of their
electrons.
A photon of forcing energy builds a standalone isolated electron to ground for the purpose to impinge the underlying suitable atom of solid state as shown in Figure 5 (a). On interaction of photon to electron, it results into convert forcing energy to merged energy where altogether force element was involved to gain instantaneous velocity of that electron as shown in Figure 5 (b). Under instantaneous velocity, that electron transferred energy to underlying transition state atom at level of ground surface as shown in Figure 5 (c). As a result, that atom distorted at invade region only through the non-orientational-based stretching of energy knots clamping electrons, which is shown in Figure 5 (d). The rebounded electron goes toward in opposite direction as shown in Figure 5 (e).

In the solar panel where each silicon cell is connected in the series add up the configuring number of photons characteristic current under certain fabrication
procedure. Thus, silicon atoms in their solar cell don’t require energy either to compensate levitation behavior or to compensate gravitation behavior of electrons to first come into their neutral state. Therefore, the supplied energy in the form of bit-energy is straight-forwardly placed under the configured trajectories of their electrons executing confined inter-state dynamics. The force disturbing at the rear side of solar cell is being neutralized by using the silver paste or through other means and generating photons characteristic current collected from front surface dealing sunlight while holding in laminated panels. As observed in solar panel at certain angle with respect to plane oriented to the south will result into an average maximum power generated throughout the year where silicon atoms in the lattice deal several bits of bit-energy directly on the division under the interaction of their photons to glass sheet where joining of three portions into bit-energy is suspended resulting into the bonus power. Therefore, in solar panels based on silicon atoms, the probability of levitating electrons in more atoms becomes higher and systematic resulting results into long length photons under uninterrupted cycles of inter-state electron-dynamics, thus, an effective generation of photonic current results. The cycles of inter-state electron-dynamics of silicon atoms are non-stop for longer period where on titling silicon solar panel at certain orientation with respect to base results into varying the efficiency which is quite effective in the peak hours of sunlight. When the atoms are not dealing perfect neutral state even though the peak sun shine is present, the power generation of solar panel may be affected. Depositing few layered ordered structure of silicon atoms at suitable substrate may solve the purpose instead of fabricating 300 to 400 µm thick solar cell. Employing various dopants and diffusing elements in the fabrication process of silicon solar cell work for the neutral behavior of electrons in the maximum atoms where their energy knots maintain original shape without stretching to any side.

As discussed elsewhere [21], the enhanced field emission characteristic of ‘tiny grains carbon films’ was due to graphitic phase tiny grains [21]; atoms of graphitic state naturally elongated along east west under the influencing force of the poles from their centers where uniform inter-state electron gap enabling enhanced field emission. Photonic current propagates to inter-state electron gap as disclosed elsewhere [24].
Atoms of different elements deal gas or solid state depending on the behaviors of levitation and gravitation existing at electron level where they self-control their nature under inter-changeable force-energy behaviors as discussed elsewhere [25]. Atoms of suitable electronic transitions deal binding to evolve structures of different formats depending on the level of their ground points; space format just at ground point, surface format at ground point and grounded format just at below ground point [26]. Again, the phenomena of surface enhanced Raman scattering, localized surface Raman spectroscopy of metallic nanoparticles or particles shapes are because of the enhanced propagation of photonic current through inter-state electron gap focusing at the single point of tip [28].

Distribution of heat energy to disordered structure is in irregular manner. More heat is resulted in structure where atoms are randomly distributed as photons characteristic current are divided into tits and bits of heat rather than their propagation to inter-state electron gap of embedded atoms in the ordered lattice. The collapsed photons in tits and bits of heat can again transform into bits of bit-energy, thus, working as the forcing energy under trajectory of inter-state electron-dynamics of suitable atom. When photons of different energy disrupt the medium (overt photons), they dissipate heat energy in the form of tits and bits. Photons assign different roles to matter on converting into one form of energy to another depending on the structural motifs and individual nature of constituted atoms. In Bragg’s diffraction, amorphous materials don’t reveal any specific structure under the interaction of photons wavelength in X-rays where energy of photons mainly converted into heat rather than being visualized in the XRD scan. In some cases, photons characteristic current is utilized to split the matter like inert gas atoms and their electrons streams are being utilized to deform or elongate underlying atoms of electronic transitions and where length of photons is sufficient along with their configured population, they reveal the light glow while reaching wavelength to visible range [24]. In the stone’s age, catching fire was discovered while striking an embedded stone to another stone under intensive acceleration where captured fluke energy at their point of contact converted into forcing energy where increasing wavelength (to visible range) in the air medium revealed the glow of light but many of the photons of forcing
energy transformed into tits and bits along with those which decreased energy resulting into produce heat as well. The set modalities of all sorts of photons depend on the origin of their generation establishing roles set by the manufacturer when they deal to suitable matter. In this context, structural design is crucial in targeting their specific application and many studies are now targeting and exploring structure either which standalone or in relation to other fields of science [29-38]. However, it has been disclosed elsewhere under original line of experiments that all structural motifs are owing to a force and energy [18] but also in semi-metallic materials [21, 39].

In the forcing energy phenomenon, force transported energy from one location to another. However, energy can't force the force as the force is acting from a distance, but a body possesses energy and forcing energy influences it. As said, a photon is an entity where the energy is being forced from one point to another. It remains confined within inter-state electron gap in atoms of developed wire where it reveals the propagation. The standalone entity force deals the influence of a body from a distance. All types of photons are the forcing energy entities and they use space either for propagation or for travelling; in propagation, they secure an almost entire energy but while travelling, they dissipate energy by flourishing many remarkable applications.

A recent study expressed the implication of tiny particles comprising certain nature atoms while using them as nanomedicine [40]. Our recent study shows the developing particles of predictor packing where force and energy are engaged in a planned manner [41]. To measure temperature of such materials is the integral part to understand science of their different behaviours and some of the studies shed light on it [42-44]. It is possible to measure temperature of atoms, their nanoscale components and at bulk scale as well without the involvement of thermocouples and the introduction of various gadgets, theories, etc. What is required to determine is the probability of levitating electrons and placement of bit-energy under their configured trajectories in atoms of various elements where locating neutral state of their electrons is vital.

On interrupting a wave generating at a point of source under confined electron-dynamics executing by a suitable atom, it resulted into long length photon called overt photon, on dealing to appropriate medium while placing at certain angle to certain
inclined ground surface converts into bits of bit-energy following by its conversion into
tits and bits of heat. A unit-photon directly gives the bit-energy which may fulfil the
requirement of atoms of many materials when they are in neutral state of their electrons.
An electron has an appearable mass and it is being placed along the force of surface
format under the stretching of clamped energy knot when varying potential energy at
certain value as discussed elsewhere [23-25]. When it is said that an electron is spoiled,
itisn’t mean that the atom of that electron is ionized, but it means that the electron
occupying atom its clamping energy knot is either permanent stretched where eroded
as discussed elsewhere [24]. In the case of photon, it doesn’t have mass and it involves
only discrete energy which is forcing from one point to another. In this context, overt
photons neither impinged nor stretched and they don’t even strike, they interact to
certain medium where their forcing energy is being dissipated in the form of heat energy
(or bits of bit-energy). While propagating in inter-state electron gap, they govern many
applications in addition to work only as photonic current. Photons travelling in suitable
medium while increasing the wavelength originate several applications. The nature of
dealt photon itself is signified as the energy reveals different behavior. Photons
wavelength in visible range enable resolution of the image down to 0.2 mm. Photons
energy in the wavelength of X-rays propagate through human body and identify the sign
of fracture. Photons characteristic current propagate in suitable wire; thus, they are
photonic current. Different cameras and devices manipulate the image on screening the
reflected photons of certain pace at the surface of an object. Structure of certain
materials deliver straight-forward application on dealing heat or photon, for example,
solutions of various metallic colloids and quantum dots; on interacting light, split light
into different colors depending on the refraction and reflection modes along with size
and shape of the nanoparticles/particles and ‘tiny grains carbon films’ give enhance field
emission characteristic based on aligned inter-state electron gap in carbon atoms when
dealing the graphite structure. A recent study explained the role of van der Waals
interactions in the case of isolated atom by considering the induced dipoles [45] which
can be attained when fluctuations of charge density are in wave-like nature [46].

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CONCLUSIONS:
Neutral state electron of silicon atom starts levitating under dynamics where a bit-energy shape like integral symbol is placed along its configuring trajectory. A bit-energy shape like opposite integral symbol is placed along the configuring trajectory of electron when it gravitates at the central point of its relaxation state. Thus, configured energy in the inter-state electron-dynamics is the forcing energy called unit-photon shape like ‘Gaussian distribution symbol with both ends turned’. Inter-state electron-dynamics of neutral state electron of silicon atom configure forcing energy of unit-photon in shape like Gaussian distribution symbol with both ends turned where uninterrupted electron-dynamics configure forcing energy of photon in a wave-like fashion if the necessitating bits of bit-energy for each forward and reverse cycles are available. Where tifs and bits of heat assemble by remaining restricted in the loop along the trajectories of inter-state electron-dynamics while dealing levitation and gravitation behaviors, two bits of bit-energy are also transformed into unit-photon energy while completing one cycle of forward-direction. The mechanism of transforming heat energy into photon energy by the silicon atom validates that atoms of various elements are elliptical discs dealing four-dimensional electronic structure at centre.

The levitating-turning-gravitating electron doesn’t remain reside in the occupied state of its atom if companion electrons keep adjusted its neutrality where the appearances of forces are not deceiving. The electron of target remains levitating and gravitating under inter-state dynamics by involving the appearances of paired forces and disappearances of paired forces wherever its moment inertia is being involved both in forward-direction cycle and reverse-direction cycle in auxiliary way because of having no contact of electron at turning point also. The electron doesn’t stay at occupying unfilled state due to its repeated behavior of appearances of two forces and disappearances of two forces, thus, goes back following the same path where configuring forcing energy of unit-photon for each cycle propagate/travel in straight line automatically by remaining connected to electron till the restoring state of rest or no placement of bits of bit-energy along the trajectory. The appearances and disappearances of forces when placing
energy along configuring trajectory of electron in reverse-direction cycle are opposite in the description to forward-direction cycle.

Conservative forces are being involved to generate photons characteristic current under uninterrupted cycles of inter-state dynamics where amount of energy due to auxiliary moment of inertia remain conserved at each point of turning the electron because of having no contact of electron to either clamping energy knot or ground surface and because of remaining under the same potential energy, size and mass.

At one side, heat energy is dealing matter at atomic level to be transformed into photon energy propagate in inter-state electron gap, whereas, at other side, transformed forcing energy of photon is converting into again heat energy under the certain interaction of medium. When a photon interacts to certain medium, it divides into bits of bit-energy following by its further division into tits and bits of heat. A unit-photon involves two bits of bit-energy and an overt photon (long length photon) involves more than two bits of bit-energy depending on the length of forcing energy.

A photon has strong analogy to electron in a manner that it propagates in inter-state electron gap working as the photonic current where it originates all sorts of applications related to force, energy and forcing energy at terminal end depending on density of propagation and wavelength. A photon characteristic current is a forcing energy preserving the power in maximum while propagating in inter-state electron gap from one point to another. A travelling photon is an entity transporting the energy from one location to another under the increasing wavelength but decreasing energy. Travelling photons of space medium form the same angle while interacting to certain medium of plane also deal the same angle resulting into divide in several bits of bit-energy, whereas, in the case of an alternative interaction, they divide to tits and bits of heat.

An electron is a matter, perhaps, the smallest entity of matter and it is most valuable when it works within the natural confinement where it transforms heat energy into photon energy. When an isolated stationary electron is directed by the forcing energy (overt photon) to impinge atom of certain transition state, the forcing energy first converted into merged energy enabling the impingement of that electron under instantaneous velocity where it transferred the transported energy to distort atom at the
point of invasion under the stretching energy knot(s) clamping electron state(s) in non-orientational manner. Clearly, electrons are matter, they occupy space, and they possess mass and impinge (or strike) under certain conditions. Photon is an assembled (processed) entity of tits and bits of heat where the element of force is enabling propagation or travelling while heat energy is the divided parts of photon where the element of force is nearly diminished. Therefore, heat energy and photon energy are not the ones impinging, distorting, levitating or gravitating, elongating or deforming, attempting gravitation or attempting levitation.

References


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Mubarak Ali graduated from University of the Punjab with B.Sc. (Phys & Maths) in 1996 and M.Sc. Materials Science with distinction at Bahauddin Zakariya University, Multan, Pakistan (1998); thesis work completed at Quaid-i-Azam University Islamabad. He gained Ph.D. in Mechanical Engineering from Universiti Teknologi Malaysia under the award of Malaysian Technical Cooperation Programme (MTCP;2004-07) and postdoc in advanced surface technologies at Istanbul Technical University under the foreign fellowship of The Scientific and Technological Research Council of Turkey (TÜBİTAK; 2010). He completed another postdoc in the field of nanotechnology at Tamkang University Taipei (2013-2014) sponsored by National Science Council now M/o Science and Technology, Taiwan (R.O.C.). Presently, he is working as Assistant Professor on tenure track at COMSATS Institute of Information Technology, Islamabad campus, Pakistan (since May 2008) and prior to that worked as assistant director/deputy director at M/o Science & Technology (Pakistan Council of Renewable Energy Technologies, Islamabad; 2000-2008). He was invited by Institute for Materials Research (IMR), Tohoku University, Japan to deliver scientific talk on growth of synthetic diamond without seeding treatment and synthesis of tantalum carbide. He gave several scientific talks in various countries. His core area of research includes materials science, physics & nanotechnology. He was also offered the merit scholarship (for PhD study) by the Government of Pakistan but he couldn’t avail. He is author of several articles published in various periodicals (https://scholar.google.com.pk/citations?hl=en&user=UYjvhDwAAAAJ).