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 it. Scientific research reveals strong analogy between photon and electron. When an atom deals neutral state, it levitates electron of outer ring from the back surface while placing the bit-energy at front surface. Gravitation behavior of that electron starts at the centre of relaxation point by including the force of side pole where the pulling force of nearby unfilled state of that atom from the front surface results into depict forcing energy shape like Gaussian distribution symbol with both ends turned called unit photon. The inertia is being involved at each stage of changing direction of that electron by introducing the disappearances of forces of two poles against the appearances of forces of two opposite poles during rest to motion and motion to rest in the first half-cycle. The same is the case in the second half-cycle of that electron during rest to motion and motion to rest but it is under different introduction of the disappearances of forces against appearances of forces. However, at stage of levitating or gravitating period of electron, only one force is being involved at one time where the opposite force is disappeared. The uninterrupted confined inter-state electron-dynamics of atom under the availability of several bits of bit-energy results into generate forcing energy shape like a wave. Two bits of bit-energy where shape of bit for first half-cycle is like integral symbol and second half-cycle is like opposite integral symbol which are being placed along the configuring trajectory of inter-state electron-dynamics during forward-direction cycle and two bits of bit-energy shape in opposite order are being placed along the trajectory of inter-state electron-dynamics during back-direction cycle. Generating forcing energy of unit photon

in each cycle is pushing to the rear side by remaining connected till the electron is not restoring the state of rest. Silicon atom is considered as a model system under neutral state. Uninterrupted confined inter-state electron-dynamics result into generate forcing energy that can travel immeasurable length and unavailability of necessitating bit-energy at any interrupted stage result into generate an overt photon. Inter-state electron-dynamics for at least two cycles generate an overt photon –a photon length twice to unit photon. Under certain interaction of unit photon, it divides equally into two bits of bit-energy instead of dividing into tits and bits of heat. The mechanism of generating photon characteristic current by the electron of neutral state atom validates that atoms are four-dimensional discs at centre of dealing no force. An isolated electron is being grounded under directed forcing energy to impinge a neutral state atom where the gained instantaneous velocity under merged energy resulting into distort atom at that point. 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; nanoscale phenomenon; atomic scale phenomenon; electron scale phenomenon

INTRODUCTION:

Humanity is being benefited by heat energy and photon energy since the existence, and electrical phenomena have been also studied since long. Catching fire in various stuffs is a usual phenomenon 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 dealing to various sorts of matter is 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 effect of the electronic structure, phase transition and localized dynamics of atoms in the formation of various tiny particles of gold has been discussed elsewhere [16]. It has been suggested 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 uniform elongation of atoms and localized forces is discussed elsewhere [23]. When the stretching of energy knots clamping electron states of an atom is uniform along the forces of surface format, it is said to be the elongation of atom and when it is non-uniform, it is said to be the deformation of atom and all those atoms of solid state dealing transition of electron reveal such behaviors [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 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 energy, and forcing energy directed phenomena dealing matter at all scale. A parallel study will discuss the force-directed phenomenon in atoms of various elements while dealing different states as per inviting energy [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-structure of space format, surface format and grounded format in different dimension has been pinpointed in suitable atoms since the explored energy invited by the executed electron-dynamics of targeted atoms under controlled forces as per gauge is discussed elsewhere [26].

In this work, the phenomena of heat energy and photon energy is discussed by considering the silicon atom where a bit-energy configures along the trajectory of electron while in levitation behavior and a bit-energy configures along the trajectory of electron while in gravitation behavior, thus, generating unit photon under one cycle of inter-state electron-dynamics. Here, charisma of an atom, while at neutral state, configuring bits of bit-energy into photon energy under confined inter-state electron-dynamics is discussed. The analogy between photon and electron is also explained here.

RESULTS AND DISCUSSION:

Under the application of photonic current, inert gas atoms split into electron streams where electrons of carrying forcing energy can be utilized to elongate or deform atoms of tiny-sized particle depending on the mechanism of their impingement as discussed in

the case of single bound atom [24]. If the impinging of electron streams to underlying atoms of monolayer tiny particle is not in accordance with their electronic structure or the structure of tiny particle is dealing the neutral state of atoms, the stretching of electron states remains non-orientational based resulting into deform atoms. The deformed atoms of tiny particles don't modify their structure to structure of smooth elements and travelling photons of adequate energy along their surface also don't align diffused electron states under the non-uniform stretching of clamping energy knots. A tiny shaped particle of gold was taken as a model system to explain the mechanism of elongation along with the modification of structure to structure of smooth elements where controlling the localized forces under perfect width of smooth elements and their inter-spacing distance is discussed [23].

These studies enlighten us that energy should be placed along the configuring trajectory of confined electron-dynamics of suitable atom as per gauge. When uninterrupted inter-state electron-dynamics of the atom executed, energy should be placed in the form of forcing energy capable of propagating from one point (location) to another (location) through medium of inter-state electron gap called photonic current or capable of travelling from one point (location) to another (location) through medium of normal environment where decreasing energy and increasing wavelength is resulted, origin of which is a photon instead of photonic current. Further details regarding photonic current is given elsewhere [24]. The word propagation sounds better when 'forcing energy' is dealing the inter-state electron gap of atoms of various elements while the word travelling sounds better 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. Inter-state electron gap of atoms sounds better when an atom deals a neutral state. Many atoms of solid behavior near ground deal neutral state under adoption of certain procedures resulting into generate unit photon under one cycle inter-state electron-dynamics. 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 as discussed below. 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 (related to bit-energy) 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 dealt node or antinode, they yet possess the element of force due to the involving of turned regions. Nevertheless, in the case where the arms of unit photon neither compressed nor divided into two parts (bits of bit-energy) 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. Those tits and bits dissipated in the mediums like liquid solutions and other suitable mediums to heat them uniformly, thus, obeying the first law of thermodynamics. The tits and bits can be a source of forcing energy if placing rightly along the configuring trajectory of inter-state electron-dynamics.
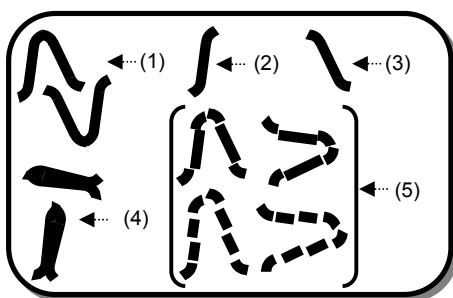
Figure 1: *(1) The smallest entity of forcing energy shape like Gaussian distribution symbol with both ends turned called unit photon, division of unit photon in shape like (2) integral symbol and (3) opposite integral symbol, (4) merge energy of unit photon and (5) division of unit photon into tits 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' 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 and three in the back-direction). 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 numbers of bit-energy. When it was interacted to medium where angle of its generating point in space (travelling) and angle of the medium at ground level 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 lattice on penetrating 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. An overt photon contained the forcing energy of at least two-unit photons; thus, it involves at least two nodes and two antinodes.
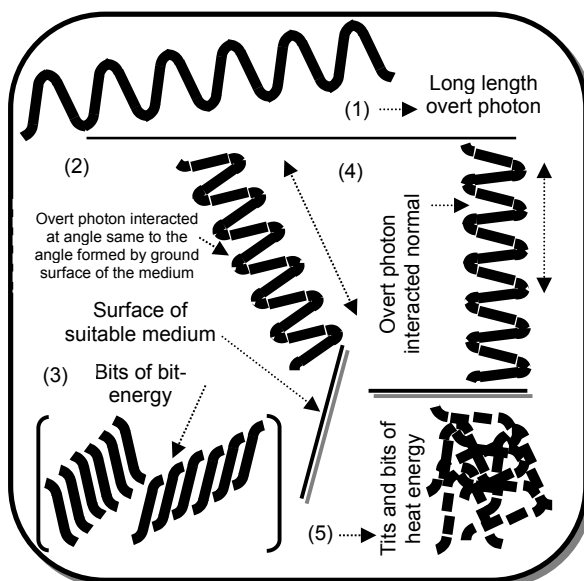
Figure 2: *(1) An overt photon generated under the trajectory of three forward-back uninterrupted cycles of inter-state electron-dynamics, (2) interaction of overt photon to suitable glass medium when its angle in space is equal to the forming angle of glass plane placed at ground level, (3) formation of several bits of bit-energy when incidence angle of overt photon is the same at which glass surface placed at ground level, (4) interaction of overt photon perpendicular to the horizontal surface of certain medium at ground*

level and (5) formation of several tits and bits of heat on interaction of overt photon perpendicular to horizontal surface of certain medium at ground level.

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 to back surface to placed energy at center edge, placing along the configuring trajectory of that electron in gravitating period at front side resulting into generate a unit photon shape like 'Gaussian distribution symbol with both ends turned'. When neutral state silicon atom deals inter-state electron-dynamics, the relevant electron is being levitated south to north while starting the motion against its inertia and ending the motion against its 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 directions of the poles. A neutral state of an atom infers where all occupied electrons are in their states dealing perfect clamping energy knots as discussed elsewhere [25]. A neutral state of the silicon atom is just after its re-crystallization state where electronic structure shows four-dimensional structure at point of centre where no force is influencing as shown in Figure 3 (a), thus, electrons of outer ring self-control their inter-state dynamics purely under existing forces of own poles. In this context, each electron of the silicon atom while at neutral state deals and undertakes its own force without influencing energy knot clamping states of other electrons. In Figure 3 (a), electron of filled state at top left-side of silicon atom experiences levitation behavior on entering the bit-energy from the front side of surface 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, a zero-force is working because of no left space where central electrons are related to nucleus (zeroth ring) dealing perfect position of clamped energy knots under neutral force, thus, providing room to enter/dissipate heat energy/bit-energy as shown in Figure 3 (a).

In Figure 3 (b), a generation of unit photon is shown where, at the centre of relaxation point, a bit-energy placed along the configured trajectory of the electron is ending when

the ended inertia of levitated electron is observed but at the same point another bit-energy is being placed which is ending when the ended inertia of gravitated electron is observed. This unit photon is the forcing energy resulted under 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 gravitation of an electron from the centre of relaxation point, the energy placed along the trajectory of electron was mainly due to steady-state gravitation behavior. That electron included its 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 only 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 inertia. Therefore, a bit-energy entered from the front surface of the atom is mainly placed at back surface along configuring trajectory of levitating electron and only a small portion of energy is placed along the trajectory configured due to its inertia. Another bit-energy is being entered from the back surface of centre of relaxation point indicated ring shape 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 back 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 back surface (in Figure 3b).

   The energy configured along the trajectory where electron changed the state (rest to motion or motion to rest) was due to its inertia while the energy configured under the trajectory in steady-state behaviors of electron was due to its levitation and gravitation behaviors. The process of inter-state electron-dynamics in neutral state ground level atom on completing six cycles (three in the forward-direction and three in the back-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 back side following by the entering of another bit-energy from the back-side of relaxation point but mainly placing along the front side during forward-direction cycle and vice versa for back-direction cycle resulting into push itself to rear space by remaining connected to its electron if it continued to execute under inter-state dynamics. This is a forcing energy which is related to photon energy. 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 of the lattice 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.
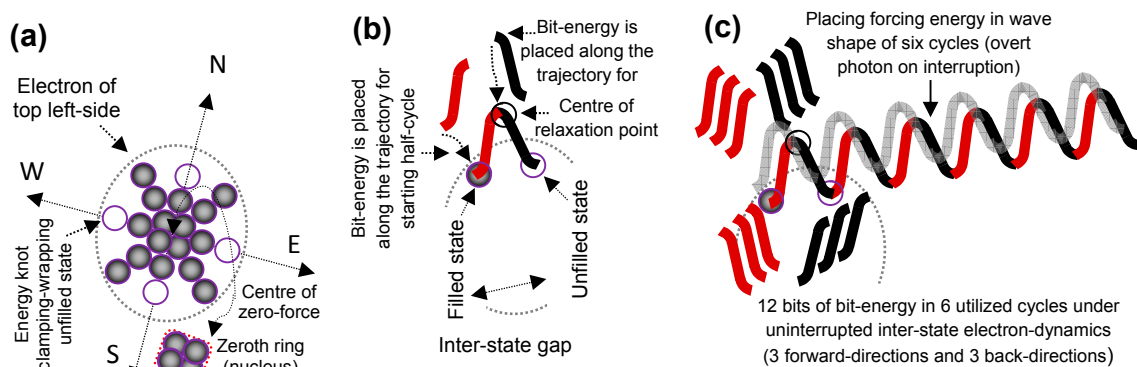
Figure 3: *A neutral state silicon atom (a) shows electronic structure, (b) generated forcing energy of unit photon where two bits of bit-energy is being utilized and (c) generating overt photon under forcing energy of six cycles inter-state electron-dynamics where total twelve bits of bit-energy are being utilized.*

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 generate unit photon. The overall shape of configured energy along the trajectory of half-cycle during levitation period of electron is like integral symbol (∫). The overall shape of configured energy along the trajectory of

half-cycle during gravitation period of electron is like opposite integral symbol. So, the energy configured in the two shapes of integral symbols, opposite to each other, remained connected under the path of electron resulting into give the overall shape of configured energy shape like 'Gaussian distribution symbol with both ends turned upward' as shown in Figure 4 (a) – a unit photon. The energy placed along the path where an electron is going to levitate under the disturbance of its state of rest is due to its inertia as it is reaching in the state of levitation behavior to relaxation point – (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 into relaxation, the energy placed is due to inertia – (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 edge, energy places again due to 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 inertia as it changed the state from motion to rest – (5) to (6) in Figure 4 (a). The motion to rest and rest to motion of the electron at centre of relaxation point is due to negligible force at that point but its turning toward unfilled state is due to influencing much greater force. The regions of inertia are responsible to force energy (photon) at one point to another.
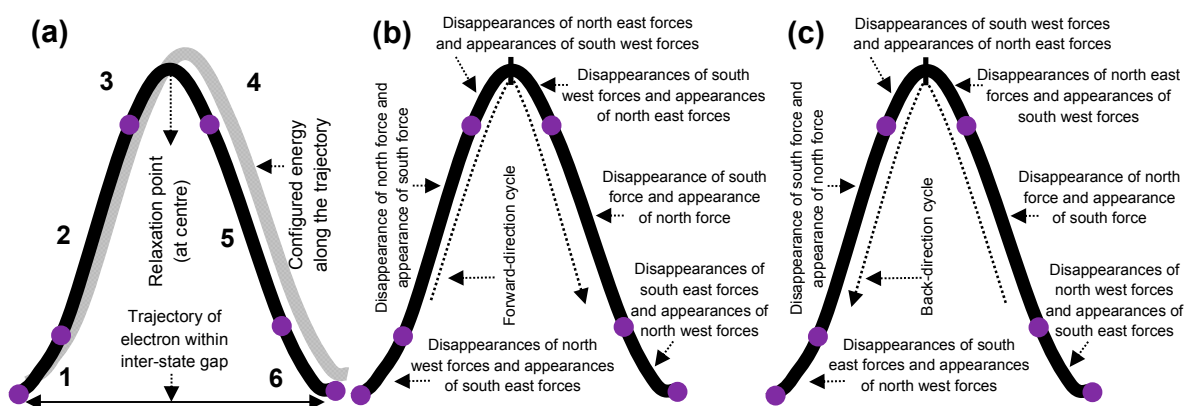
Figure 4: *(a) different regions of placed energy of unit photon along configured trajectory of inter-state electron-dynamics – front side (dark color) shows trajectory of electron and rear side (grey color) shows*

placed energy of unit photon and regions of disappearances and appearances of forces as per gauge of the electron while in (b) forward-direction cycle (left to right) and (c) back-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 back-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 back-direction cycle are opposite in description.

The element of levitational force influencing is responsible to execute dynamics of electron of target (at top left-side in Figure 3a) south to north side at inertial to inertial point where a bit-energy shape like integral symbol is placed along the configured trajectory. 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. The inter-state electron-dynamics remained uninterrupted under the neutral state of the atom at ground level. 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 but these are appeared to be crucial. 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 couple of unit photons on dividing into four bits of bit-energy will result into generate energy for one forward-direction cycle and one back-direction cycle. It appears that atoms of many materials are eligible to deal this bit-energy if they succeed in maintaining their neutral state at ground level.

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 neutral state ground level atom as shown in Figure 5

(c). As a result, that atom distorted at invade region only through the non-uniform stretching of energy knots clamping electron states, which is shown in Figure 5 (d). The rebounded electron goes toward back direction as shown in Figure 5 (e).
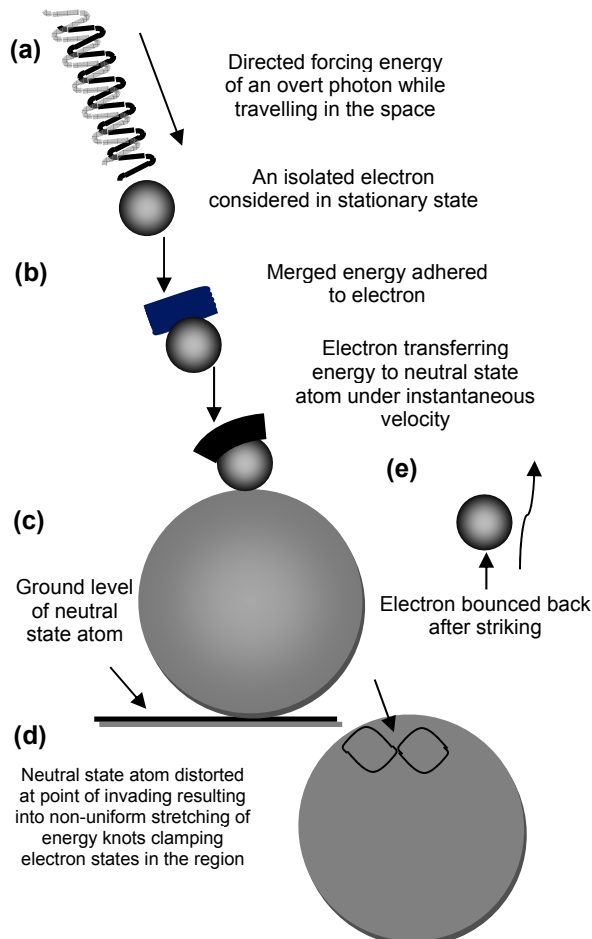
Figure 5: *(a) a directed overt photon is in the state of interaction to the isolated electron (considered stationary) under the carried discrete forcing energy, (b) overt photon converted into merged energy where the element of force is converted into instantaneous velocity of the electron, (c) accelerated electron under instantaneous velocity impinged to the underlying neutral state at ground level atom where it transferred the merged energy to the atom while in-contact, (d) transferred energy to atom of neutral state, externally, that atom deformed at point of invading under distortion of energy knots clamping electron states, and (e) impinged electron goes alongside on transferring energy to atom through where it bounced back.*

In the solar panel where each silicon cell is connected in the series add up the generating 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 for first coming into 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 backside 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 avoided 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 of ground level 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. The working of all four electrons (for inter-state dynamics) of outer ring of silicon atom shown in Figure 3 (a) will result into generate extremely high current. Employing various dopants and diffusing elements in the fabrication process of silicon solar cell work for the neutral behavior (at ground level) of filled and unfilled states of atoms where energy knots maintain original shape without stretching to any side. Again, incorporating hydrogen atoms to surface of silicon wafer upto few layers work as the spacers for inter-state electron-dynamics of silicon atoms as the electron of top left-side move from frontside surface to backside surface and backside surface to frontside surface of atom (or opposite to that) during each cycle, both in forward-direction and back-direction, to generate photons characteristic current where neutral behavior determined.

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 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 with respect to surrounding environment as discussed elsewhere [25]. Atoms of suitable electronic transitions deal binding to evolve structures of different formats depending on the level of their state - space format just above the ground point, surface format at ground point and grounded format just below the 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 [27].

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 energy of heat 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 generate 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 [28-37]. 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, 38].

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 [39]. Our recent study shows the developing particles of predictor packing where force and energy are engaged in a planned manner [40]. 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 [41-43]. 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 their neutral state 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. An electron has an appearable mass and it is being diffused under the stretching of clamped energy knot as discussed elsewhere [19]. When it is said that an electron is spoiled, it doesn't mean that the atom of that electron is ionized, but it means that the electron occupying atom is either permanent stretched or 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 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 [44] which can be attained when fluctuations of charge density are in wave-like nature [45].

CONCLUSIONS:

A suitable electron of neutral state silicon atom starts levitating when 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 centre of its relaxation point. 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 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 cycle are available. Where tits 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 generated while completing one cycle of forward-direction.

The levitating electron doesn't remain reside in the occupied state of the atom on dealing bit-energy from the appropriate side where the appearances of forces are not deceiving. The electron of target in neutral state silicon atom remains levitating and gravitating under inter-state dynamics by involving the appearances of paired forces and disappearances of paired forces wherever its inertia is being involved both in forward-direction cycle and back-direction cycle. 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 generating forcing energy of unit photon for each cycle pushes to the rear side automatically by remaining connected to electron till the restoring state of rest. The appearances and disappearances of forces when placing energy along configuring trajectory of electron in back-direction cycle are opposite in the description to forward-direction cycle.

At one side, heat energy is dealing matter at atomic level to be configured in inter-state electron gap, whereas, at other side, generating 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, wavelength, etc. A photon characteristic current is a forcing energy preserving the power at maximal 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 configures heat energy to photon energy. When an isolated stationary electron is directed by the forcing energy (overt photon) to impinge neutral ground state atom, the forcing energy first converted into merged energy enabling the impingement of that electron under instantaneous velocity where it transferred the transported energy to deform atom at the point of invasion under the stretching energy knot(s) clamping electron state(s). Clearly, electrons are matter, they occupy space, and they possess mass and impinge (or strike) under certain conditions. Electrons reveal levitation and gravitation behaviors wherever their atoms deal the neutral behavior and silicon atom deals it at ground level under an understandable procedure. Photon energy is an assembled entity of tits and bits of heat where the element of force is dominating 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, levitating or gravitating.

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