

PSYCHO-PHYSICS

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ABSTRACT

Conventional atom model must be criticized on the following four points.

- (1) Natural motions between positive and negative entities are not circular motions but linear going and returning ones, for examples sexual motion, tidal motion, day and night etc.
- (2) Potential energy generation was neglected when electron changes its orbit from outer one to inner one. The $h\nu$ is the kinetic energy of the photo-electron. The total energy difference between orbits comprises kinetic and potential energies.
- (3) The structure of the space must be taken into consideration because the properties of the electron do not change during the transition from outer orbit to inner one even though it produces photon.
- (4) Total energy conservation law applies to the energy flow between mind and matter because we daily experiences a interconnection between mind and body.

New atomic model (the crystallizing π -bonding) was proposed in the journal of material processing technology since 1997 for the explanation of the mechanical behaviors in terms of physics. Π -ray physics proved that the electrons can come out from in the nucleus and modern chemistry corresponds to the π -bonding by the nuclear electrons. The π -bonding structure of the protons outside the nucleus is that electrons move between protons of the different atoms.

The perception step and the characteristic frequency in signal transduction is due to the accumulation of the π -rays outside of the proton before their absorption to the nucleus.

1. THE CRYSTALLIZING Π -BONDING

The crystallizing π -bonding [Ref.1, Ref.2] produces two π -rays of one wave length during the electron's going and receiving trip between two protons and makes an electron,

a positron, a neutrino and an antineutrino disappear at the end of the trip as in Fig.1.

During the electron's going trip between two protons two π -rays of one wave length starts to produce.

During the electron's receiving trip the two

π -rays of one wave length finishes to produce. The two π -rays of one wave length are supplied and absorbed to the proton. The π^0 mesons produce implosion bonding between proton and neutron in this case.

There are four kinds of π -bondings between the protons, closed π -bonding, open π -bonding, covalent π -bonding and ferromagnetic π -bonding.

The closed π -bonding makes the protons fixed and only one electron moves between two protons of the attended ones. It produces two π -rays during the going and returning trip. Conventional metallic bonding belongs to this bonding.

The open π -bonding is an instantaneous bonding between two protons. The one of the two protons supplies an electron. It produces π -rays and then disbonds soon after. The signal transduction of the neuron belongs to this one.

The covalent π -bonding makes two electrons move between two protons and does not produce π -rays. It belongs to conventional covalent bonding.

The ferromagnetic π -bonding makes electrons circulate towards only one direction via the closed π -bonding protons and then produces magnetic moment. But it does not produce π -rays.

Conventional van der Waals bonding corresponds to the open π -bonding and the conventional hydrogen bonding also belongs to the open π -bonding. Conventional ionic bonding gives electrons to the other atom.

2. THE CRYSTALLIZING Π -BONDING INSIDE THE NUCLEUS AND ENERGY CONSERVATION

The bonding structure of the protons inside

the nucleus is also the crystallizing π -bonding as in Fig.2[Ref.3].

The electrons inside the nucleus were not possible in the conventional atomic model. Π -ray physics said that they can exist in the nucleus satisfactorily [Ref.4], however.

In view of energy conservation law kinetic energies and potential energies of a positron, an electron, a neutrino and an antineutrino must supply the potential and kinetic energies of the produced π -gamma rays. They will be absorbed to the proton soon after the π -bonding and then the strong interaction will happen due to the absorption.

3. THE CRYSTALLIZING Π -BONDING OUTSIDE THE NUCLEUS AND ENERGY CONSERVATION

The bonding structure of the protons outside the nucleus is also the crystallizing π -bonding as in Fig.2[Ref.3]. The electrons move between protons of the different atoms and make π -rays of much lower energy. In view of energy conservation, following energy calculations are needed.

$$\begin{aligned} &\text{Kinetic energy of an electron after beta} \\ &\text{decay} \\ &=3\text{Mev}=3\times 1.602\times 10^{19}(\text{J})\times 10^6=4.8\times 10^{-13}(\text{J}) \end{aligned} \quad (1)$$

$$\begin{aligned} &\text{Kinetic energy of a positron after beta} \\ &\text{Decay} \\ &=3\text{Mev}=4.8\times 10^{-13}(\text{J}) \end{aligned} \quad (2)$$

$$\begin{aligned} &\text{Potential energy of an electron after beta} \\ &\text{decay} \\ &=m_e C^2=9.109\times 10^{31}(\text{kg})\times \{3.0\times 10^3(\text{m/sec})\}^2 \\ &=8.19\times 10^{-14}(\text{J}) \end{aligned} \quad (3)$$

Energy of gamma ray