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Article 5. Electricity and Stability of Electron orbits in Atom/电流与原子中电子运动轨道的稳定性

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Abstract

This article re-defines the generation mechanism of electric current, based on which the relationship between conductivity and atomic structure is discussed.

Key words: Electricity, Pulse of Electromagnetic Waves, Conductivity, Free Electron Orbit, Conduction Effect.

Discussion

The real nature of electricity is the fluids or pulse of electromagnetic waves, rather than electron movement across atoms in conductor materials (otherwise, there will be a large number of positively charged protons bursting out at high speed, so that all electric conductors are the same as radioactive elements. This theory is obviously out of date). Consequently, the conductivity of different conductor materials, calculated under the same conditions, reveals the stability of free electron orbits in atom. The higher conductivity, the less stable for free electron orbits. The pulse of electromagnetic waves indicates that the free electrons across different atoms fluctuate concurrently along the same direction. Consequently, the less stable for electron orbits, the easier fluctuation movement. Based on this theory, it is to further deduce the conductivity below:

The less symmetry of free electron distribution in molecule, the more conductivity (more free electrons). For example, in the graphite structure unit within which each carbon atom combines with other carbon atoms by forming three covalent bonds, still leaving one free electron as the conductor of charge. For example, C60 is the highly symmetric form in space under normal conditions so that it is not the electric conductor. Once a metal atom is synthesized into C60 to alter its symmetry of spatial structure, which leads to the unpaired electrons orbits, superconductivity occurs. In comparison and contrast, the higher symmetry of elementary particle polarity distribution in molecule, the higher magnetic moment for the whole molecule [2].

Defining the generation mechanism of the electric current effect: the electric current is the energy transfer flow generated by the conduction effect of particles' acceleration motion between two or more electric pulse wave sources. Free electrons produce electromagnetic waves in thermal motion. Because the thermal motion is along irregular orbit, the generated electromagnetic waves are pulsed electromagnetic waves. After the conductor is energized, the free electrons at the poles of the power supply firstly accelerate the thermal movement under the effect of the electric field of the power supply, and the frequency of the pulse wave increases, thus transferring the electromagnetic wave energy to the free electrons in the middle of the conductor, which makes the conducted electrons accelerate the thermal movement correspondingly. The accelerated thermal motion of free electrons along the direction of electromagnetic wave energy conduction is the mechanism of current generation. If the thermal motion orbits are more consistent among conducted electrons along the direction of electromagnetic wave energy conduction, the higher the conductivity of the conductor. The elementary particles in the nucleus move like a spring as longitudinal wave motion on the fourth dimension axis, consequently producing pulse wave [3]. The mechanism of current generation caused by the elementary particles in the nucleus is similar to electrons discussed above, but is different from the electrons in the electron cloud. The electromagnetic wave generated by the irregular thermal motion of electrons in the electronic cloud is transverse wave, while the pulse wave generated by the elementary particle in the nucleus is longitudinal wave, which is the ray wave; The ray waves show stronger penetration capacity and faster transmission speed, whose current effect can efficiently transmit in the vacuum at long distance, so the cosmic rays can be detected more easily than the light wave. **Different from the electrons in the electron cloud, the pulse wave current generated by the elementary particles in the nucleus is usually generated under the excited state. The pulse wave energy generated by the elementary particles of excited state in the nucleus of an atom can be transmitted to the elementary particles in the nucleus of other surrounding atoms, accelerating the thermal motion of the particles between different atoms in the form of conduction, thus generating electric current.** In summary, the current effect transmits in the form of electromagnetic wave energy flow, which can propagate in the vacuum conditions.

关键知识点译文：

定义电流效应的原理：电流效应是由两个以上电脉冲波波源之间的粒子加速运动传导效应产生的能量传递流。电子在热运动中产生电磁波，由于热运动是无规则的轨道，其产生的电磁波为脉冲性质的电磁波。导体通电之后，导体在电源两极的自由电子首先在电源电场作用下加速热运动，发出的脉冲波频率增加，从而将电磁波能量向导体中间部位的自由电子传递，使得被传导的电子加速热运动。在电磁波能量传导方向上的自由电子加速热运动为电流的产生原理。如果电磁波能量传导方向上自由电子加速热运动轨道越一致，导体的导电性能越高。原子核内的基本粒子在第四维度轴上做弹簧式的纵波型运动，所产生脉冲波导致的电流效应与以上论述的电子类似，但是与电子云中的电子相比，有所区别。电子云中的

电子无规则热运动产生的电磁波为横波，而原子核内基本粒子在第四维度轴上做弹簧式的纵波型运动，所产生的脉冲波为纵波[3]；后者为射线，穿透性更强，传播速度更快，其产生的电流效应可以在真空中长距离传播，因此宇宙射线可以比光波更容易被探测到。**与电子云中的电子不同，原子核内基本粒子产生的脉冲波电流一般是在激发态作用下产生，激发态产生的脉冲波能量可以传导至周边其它原子的核内基本粒子，在不同原子间实现传导型粒子加速热运动，从而产生电流。**以上所述，电流效应的传播形式为电磁波能量流，该能量流可以在真空中传播。

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