

Electrons Dynamics in Semi-Conductor: Various Laws Governing it & why they are in Contradiction to Each Other

Shaikh Haquemobassir Imtiyaz

*Department of Electronics Engineering
Pillai Institute of Information Technology, Engineering, Media Studies & Research
Mobshri@gmail.com*

Abstract

In this paper we are noting down laws which pre-dominantly talk about electron dynamics in semi-conductor and how these laws after certain frame contradicts each other. not that the laws are wrong but with inference that these laws are the observation on certain experiments with many parameters excluded

Keywords: pauli's exclusion principle, heisenberg's uncertainty principle, dipole movement, electro static force with in atom.

Pauli's exclusion principle

Statement

No two electron in an atom can have identical quantum numbers. To be precise it says that for hydrogen atom the two electrons have different quantum number at a given time, this theory in precision talks about bonding

Contradiction

At some further point pauli also stresses on the different spin motion of two electrons in same orbit. This very point leads to two un-answered question. 1) in case of statement first if the very basic of bonding is different quantum number, then the theory on energy layer over-lapping due to disturbance of solid constant field around atom gets disturbed which permits the transfer of electron fails to exist 2) if two electron in an orbit have different rotation then the very path after separation will become un-predictable because if electron is spinning clock-wise then it will move to left or if in anti-clockwise then after separation it will move to right, suppose that if

two electron with two different movement comes together for bonding it may end up giving excess thermal heat

Heisenberg's Uncertainty Principle

It states that both position & velocity can-not be measure both at same time. If we do in death study it goes on saying that if momentum & position are two canonically opposite conjugate then if we make position zero, then momentum becomes in-finite

Contradiction

But the in-depth observation of basic momentum dynamics tells us that electron may be taking random trajectory but in that trajectory position & velocity must be measurable simultaneously. Lets try understanding suppose an electron travelling in direction "y" collides with an electron, now after collision the probability of electron travelling in any direction is same as probability of travelling further ahead,if ever electron after collision changes its direction then it will take some finite time where the speed will become zero before again accelerating in new direction. That very point of speed getting zero the electron will come to rest for that finite time velocity is zero and the position is point of collision

Neon Molecule Condensation

Practical observation have shown that neon molecule condensed above each other,the reason given is the atomic di-pole movement which brings the closer to condens

Contradiction

This theory looks in-complete because it is silence that whether di-pole movement exist in every atom? If it does exist then this may be the very cause of atom coming in proximity, rather than assuming that due to spin rotation electron get temporary magnetism which plays its role in bonding

Conclusion

Above mentioned theory is not wrong but with limitation that every theory is correct in certain frame, if you bring above mentioned theory on a generalized frame then every theory seems to be contradicting each other. This point to the basic large gap while assuming or establishing the theory which just concentrated on certain behavior rather than entire domain

References:

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