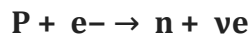


Question #84848, Chemistry / Inorganic Chemistry | for completion

Explain 'orbital electron capture process'. How will you characterize the process?

Answer:

Electron capture (K-electron capture, also K-capture, or L-electron capture, L-capture) is a process in which the proton-rich nucleus of an electrically neutral atom absorbs an inner atomic electron, usually from the K or L electron shell. This process thereby changes a nuclear proton to a neutron and simultaneously causes the emission of an electron neutrino.



Since this single emitted neutrino carries the entire decay energy, it has this single characteristic energy. Similarly, the momentum of the neutrino emission causes the daughter atom to recoil with a single characteristic momentum.

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