Quantum physics

* Wave Nature of particles
  + We have thus far developed a model of atomic structure based on the particle nature of matter:
  + Atoms have a dense nucleus of positive charge with electrons orbiting the nucleus in rather peculiar quantum orbits. Electrons are thus negatively charged particles. Or are they?…
* DeBroglie wavelength
  + DeBroglie hypothesis
    - De Broglie postulated that in analogy to light, matter could also have particle and wave characteristics.
      * Where E represents relative energy equation by Albert Einstein which implies that the energy of a body is its mass multiplied by the speed of light
      * De Broglie hypothesized that this energy was also equal to KE standing for kinetic energy and m0c2 being the resting mass energy
      * standing for electon momentum
      * standing for wavelength
      * standing for energy
      * standing for Planck’s constant
        + Planck’s constant relates to the energy in one quantum also known as photon of electromagnetic radiation to the frequency of that radiation
      * standing for frequency
      * DeBroglie wavelength
* DeBroglie wavelength and the bohr atom