Volume Charge Density Functional Theory (VDFT)

[OR: Volume Density Functional Theory (VDFT)]

Yibing Qiu
yibing.qiu@hotmail.com

"I may be wrong and you may be right, and by an effort, we may get nearer to the truth."

----------Sir Karl Raymond Popper

The Basic Points of View:

Volume charge density functional theory (VDFT) is a latest theory about the structure and distribution of electrons, is based on atomic concentric spherical layers-type model [1], and is a quantization mouthed that study the structure and distribution of multi-electrons system, the main goal is to replace the *Electrons density* and the *Wave function* for basic quantity research by *Volume charge density*, finally, establish a meet the reality, decisive, causality, locality and completeness, multiple causes and multiple effects of quantum theory.

The total charge $Q = Ze^{-}$; Volume charge density functional $\rho_i = F(E, H, Q)$,
Frequency-field function $v_i = f(\rho_i) = f[F(E, H, Q)]$,
Energy levels represents function $E_i = hv_i = h \cdot f(\rho_i) = h \cdot \{f[F(E, H, Q)]\}$.

Sphere center symmetry, isotropic, $\rho_i = q_i / V_{icl}$; Distribution in the radius ρ;
Divergence on the radial gradient; Fine Structure ------ the gradient of divergence;
Hyperfine structure ------the second gradient of divergence;
Between the various q_i cited, balance and nuclear repulsion between.

Energy levels E_i relationship with the natural frequency v_i and the volume charge density ρ_i is:

$$E_i = hv_i = h \cdot f(\rho_i) = h \cdot \{f[F(E, H, Q)]\}.$$

Reference

[1] Concentric spherical layer-type model of an atom

http://vixra.org/abs/1402.0104

< The Causes and Mechanism of Atomic Energy Levels quantization >