

# Volume Charge Density Functional Theory (VDFT)

[OR: Volume Density Functional Theory (VDFT)]

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*“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 density functional theory* (VDFT), is about the electronic structure (Law of charge distribution of extra-nuclear) latest theory, is a research on concentric spherical layers model [1], multi electron atoms ( $Z > 1$ ) system based on the electronic structure (structure and charge distribution of extra-nuclear) quantization mouthed, the main goal is to replace the *Electron density* and the *Wave function* for basic quantity research by *Volume charge density*, and build a final accord with reality, decisive, causality, locality and completeness, multiple causes multiple effects of quantum theory.

The total charge  $Q = Ze$ ; *Volume Charge density functional*  $\rho_i = F(E, H, Q)$ ,  
Frequency-Field Function  $v_i = f(\rho_i) = f[F(E, H, Q)]$ ,  
Levels represents a 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  $\rho$ ;  
Divergence on the radial gradient; Fine Structure ----- gradient divergence;  
Hyperfine structure -----second gradient divergence; between the various  $q_i$  cited,  
balance and nuclear repulsion between.

$E_i$ -level relationship with the natural frequency of the  $v_i$  and charge density  $\rho_i$  of:  
 $E_i = hv_i = h \cdot f(\rho_i) = h \cdot \{f[F(E, H, Q)]\}$ .

## 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 >