

# A THEORY OF ETHER, PARTICLES AND ATOMS

Igor S. Makarov

*The Reform Science Center, P.O. Box 461, Haifa 31003, Israel*

*Email: [info@reformscience.org](mailto:info@reformscience.org)*

Keywords: ether, origin of matter, particle physics, nuclear structure

A new method based on systematic approach [1] has enabled us to discover the following: (1) there are only two fundamental particles – virtual electron (electrino) and virtual positron (positrino), which have no physical properties; their interaction gives birth to virtual positronium characterized by energy; (2) there exists ether, the primary physical medium, time-like, arithmetical continuum consisting of complex positroniums (virtual positroniums exchanging photons) and characterized by complex energy; ether is described by correlation function and density of singularity; (3) in ether there takes place spontaneous generation of mesons and neutrons; cosmic rays are the proper radiation of ether; experimental data on cosmic rays have enabled us to evaluate the characteristics of ether and dimensions of some particles; mean radius of electron proved to be about  $0.01 \text{ fm}$ ; (4) in respect to ether excitations, neutron is a linear system with continuously distributed parameters consistent spatially with ether, which accounts for its high stability; because of its time-space contradiction, neutron transforms into H-atom; (5) H-atom is a linear system with lumped parameters characterized by its structural function consistent in time with ether; H-atom consists of three quarks implementing collective interaction of virtual electrons and positrons inside the atom and its photon exchange with ether; quarks are described by real symmetric matrices; agents of their processes correspond to so-called gluons; H-atom lacks nuclear interaction and is not a real atom but rather its embryo; (6) the essence of nuclear interaction is the conservation of energy by alternate transformation of electric energy to magnetic one and vice versa, the atom of deuterium (D-atom) being its fundamental case; (7) H-atom and neutron can roughly be modeled by electric RC- and LR-circuits; for exact representation, it is necessary to take into account magnetic properties of H-atom and electric properties of neutron, modeled by inductance and capacitance; D-atom is modeled by electric LCR-circuit, while He-atom by T-shape low-pass filter; all above electric parameters are evaluated; (8) the models showed the pulse response of H-atom follows closely the correlation function of ether in the high-energy region, while their spectral characteristics differ in the vicinity of the cut-off energy,  $10^{8.5} \text{ eV}$ , due to abundance of helium and other elements; (9) excited by photons, atoms and neutrons respond with neutrinos – organized groups of photons; D-atom transforms electric neutrinos to magnetic ones and vice versa, while He-atom retains their original type, which imparts it the property of transparency; (10) the nuclear structure evolves by shells, D-atom being its basic element; there are seven shells: He-shell (2-shell), octahedral shell (8-shell), icosahedral shell (18-shell), double-icosahedral shell (36-shell) and three inverse shells of 18, 8 and 2 D-atoms; additional neutrons perform inter-shell interaction; electron shells are integral components of the nuclear structure; (11) every nuclear shell can be modeled by an electric LCR-network, so that the whole atom can be represented by a matrix of impedances; the atom with an atomic number  $m$  consists of  $m$  D-atoms, is represented by a network with  $m$  degrees of freedom and, when excited, emits  $m$ -neutrinos; (12) the stellar medium simulates conditions of ether, so that atoms produced in it become different models of ether, achieving their perfection in the U-atom; the development of nuclear structure is actually the realization and exposition of the implicit structure of the H-atom.

1. Igor S. Makarov. A Theory of Ether, Particles and Atoms. Second Edition. Open University Press. Manchester, UK, 2010. Order: Amazon.com, ISBN-13: 9781441478412.

Download: [www.keepandshare.com/doc/2520538/pdf-text-amazon](http://www.keepandshare.com/doc/2520538/pdf-text-amazon)