Ginzburg's List and Leonov's List

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The possibilities of the theory of Superunification are unlimited. This is the most powerful analytical apparatus for studying matter. I am the author of the fundamental theory of Superunification and for me there is no unquestioned authority on science. As a theoretical physicist, I do not see any real competition in the world for me. For a quarter of a century now I have been working on complex scientific problems almost alone with my assistants. None of the physicists could even come close to understanding the theory of Superunification. I get a lot of scientific information, but do not find it interesting for myself. I do not see breakthrough discoveries in a fundamental way. Fundamental science stopped at the level of Newton and Einstein and without the theory of Superunification the further development of fundamental science and breakthrough technologies is unthinkable.

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A quarter century ago, I combined Einstein's general theory of relativity (GR) and quantum theory. To do this, it was necessary to open by me only one new particle - the quantum of space-time (quanton). Despite this, physicists are still looking for another way to unite GR and quantum theory, but they cannot find it. Scientists want to receive grants and funding by any means, and they don't give a damn about scientific truth. I personally did not betray my beliefs for any money, remaining faithful to science. New knowledge comes from God; he sees everything and rewards us for our dedication. Unfortunately, many do not understand this.

Many years ago, I tried to convince the future Nobel laureate of the famous theoretical physicist Vitaliy Ginzburg that his scientific concept regarding the fifth force is incorrect. He believed that we cannot find the fifth force because it is very weak and cannot be detected. I thought the contrary that the fifth force should be very high and it should be a Superforce based on the concept of theoretical physicist Paul Davies. I even wrote on the Internet the article "The main mistake of the physicist of Ginzburg", but that did not find my supporter in his person, although neither he nor his assistants could refute my arguments. Time has shown that I was right.

In this brief preface to volume 1 it is not possible to clarify all problems of the theory of Superunification and show its possibilities. Therefore, I present here for comparison two lists of the key problems of contemporary physics: „Ginzburg's list" and „Leonov's list". The first list of 30 points presented by Nobel laureate Vitaliy Ginzburg in a review paper "On some advances in physics and astronomy over the past three years" published in the Russian journal Uspekhi Fizicheskikh Nauk (volume 172, No. 2, 2002, pp. 213-219).

"Ginzburg's list":

1. **Controlled thermonuclear fusion.**
2. **High-temperature and room temperature superconductivity.**
3. **Metallic hydrogen. Other exotic substances.**
4. **Two-dimensional electronic liquid.**
5. **Some questions of solid state physics.**
6. **Second order phase transitions.**
7. **Physics of surface. Clusters.**
8. **Liquid crystals. Ferroelectrics. Ferrotoroics.**
9. **Fullerenes. Nanotubes.**
10. **Behavior of matter in superstrong magnetic fields.**
11. **Nonlinear physics. Turbulence. Solitons. Chaos. Strange attractors.**
12. **Rasers, grasers, superpowerful lasers**
13. **Superheavy elements. Exotic nuclei**
14. **Mass spectrum. Quarks and gluons. Quantum chromodynamics. Quark- gluon plasma**
15. **The unified theory of weak and electromagnetic interaction. $W^{\pm}$-Z^{0}-bosons. Leptons.**
16. **Standard model. Great integration. Superunification. Proton decay. Neutrino mass. Magnetic monopoles.**
17. **Fundamental length. Interaction of particles at high and superhigh energies. Colliders.**
18. **Nonconservation of SR- invariance.**
19. **Nonlinear phenomena in vacuum and in superstrong electromagnetic fields. Phase transitions in vacuum.**
20. **Strings. M-theory.**
21. **Experimental verification of the general theory of relativity.**
22. **Gravity waves, their detection.**
23. **Cosmological problem. Inflation. Λ-term and 'quintessence'.**
24. **Neutron stars and pulsars. Supernova.**
25. **Black holes. Space strings (?).**
26. **Quasars and the nuclei of galaxies. Formation of galaxies.**
27. **Problem of dark matter (hidden mass) and its detection.**
28. **Origin of cosmic rays with the superhigh energy.**
29. **Gamma splashes. Hypernovas.**
30. **Neutrino physics and astronomy. Neutron oscillations.**

Analyzing the Ginzburg list we cannot find there the causal problems of fundamental interactions:

1. **In the region of gravity. The reasons for gravity and inertia *are unknown*.**
2. **In the region of electromagnetism. The carrier of electromagnetism *is unknown*. Maxwell's equations are recorded purely empirically and, until now, do not have analytical derivation.**
3. **In the field of physics of elementary particles. The structure of none of the elementary particles, including the basic particles: electron, positron,**

proton, neutron, photon, neutrino, is known The reason for the formation of mass in particles *is unknown*.

4. **In the field of nuclear physics. The nature of nuclear forces and reason for the mass defect of the atomic nucleus as the basis of energy release, *is unknown*.**

It is gratifying that all problems of physical science enumerated above are solved in the theory of Superunification, which is the most powerful analytical apparatus for a study of matter.

When Ginzburg composed his list, he did not know of the theory of Superunification. In order to consider the possibilities of the theory of Superunification and new fundamental discoveries of the quanton and the superstrong electromagnetic interaction, I have compiled an additional „Leonov's list" of also 30 new problems in order to enlarge „Ginszburg's list".

'Leonov's list':

1. **Primary matter (latent, hidden form), the quantum of space-time (quanton), the discrete structure of quantized vacuum, quantization. Superstrong electromagnetic interaction (SEI). Theory of the elastic quantized medium (EQM).**
2. **Electrical and magnetic monopoles. Magnetic quark and elementary magnetic charge - Leon. Electrical asymmetry of the universe.**
3. **Alternating fields, infinite superstrings and their tension.**
4. **Time as the material category of space-time. Chronal fields. Quanton is a particle of time.**
5. **Spherical invariance and the principle of the relative-absolute dualism of the quantized space-time.**
6. **Quantum theory of relativity. Nonlinear relativity.**
7. **Absolute velocity. Methodology of measurement. Resistance of vacuum to uniform motion and to motion with acceleration.**
8. **The theory of united electromagnetic field (TUEF) and Superunification, the open quantum-mechanical systems.**
9. **Quantum nature of gravity. Solution of Poisson's equation for the spherically deformed vacuum. Nature of mass. Gravitational diagram, well and hill. Mass defect.**
10. **Balance of gravitational potentials, quantum density and energy.**
11. **Wave transfer of substance and wave-particle duality. Nature of wave (quantum) mechanics.**
12. **Structure of electron and positron. Zones of attraction and repulsion.**
13. **Spin and mass. Equivalence of energy and mass.**
14. **Sign-alternating shells of nucleons. Nature of nuclear material and nuclear forces. Complex structures of elementary particles. Formation of heavy nuclei. Atomic structures, valence bonds, the stability of molecules. New materials. Fullerenes. Clusters. Electron-positron plasma. Ball lightning.**
15. **Maximum parameters of relativistic particles.**

16. **Structure of neutrino. Speed, energy and direction distributions of the neutrino. Methods of registration. Energy-information interactions. Field structure of the DNA. Protection from fluxes of space neutrinos.**
17. **Derivation of Maxwell's equations. Nature of magnetism, electricity and electromagnetism. Electromagnetic symmetry of vacuum.**
18. **Non-radiation of the orbit electron inside the gravitational well of the atomic nucleus. Perpetual motion. Electron motion in vacuum without emission. Nature of superconductivity. Photon electron emission.**
19. **The two-rotor structure of the photon. Wave trajectory of the photon in optical media. Retarding the linear speed of the photon.**
20. **Faster-than-light speeds. Tachyons. Kozyrev waves.**
21. **Free energy, the methods of release. Quantum energetics.**
22. **Temperature of substance. Heat capacity. Quantum thermodynamics. Open quantum thermodynamics systems.**
23. **Cold synthesis of particles and antiparticles. Usherenko effect. Quantum reactors.**
24. **Creation of nonequilibrium force in vacuum. Quantum engines.**
25. **Wave processes in vacuum. Longitudinal gravity waves. The speed of gravity. Veinik's waves. Kozyrev's waves. Torsional oscillations of vacuum.**
26. **Nonlinear energy phenomena in liquid. Electron-positron plasma in a liquid. Quantum heat-generators.**
27. **Antimatter and antigravity. Black and white holes.**
28. **Model of the quantized universe and its latent energy. Space curvature.**
29. **Relaxation of the universe and the motion of galaxies with acceleration.**
30. **Circulation and the conservation of global energy. Problem of eternity.**

I do not comment on the two lists, I simply present them for comparison. The readers have the possibility to study theory of Superunification in greater detail. I would like to mention only that the new fundamental discoveries and the theory of Superunification have high applied value, opening the prospects for quantum energetics - power engineering of the 21st century, which includes both the known power cycles (chemical and nuclear reactions), and fundamentally new ones. I also would like to state that the superstrong electromagnetic interaction is the sole energy source of the universe and everything else, including nuclear reactions, are only methods of extracting the energy of this interaction. Our task is to learn to master for the good of the civilization new ecologically safe power cycles, relying on the great opportunities of the theory of Superunification and new experimental facts. This will be described in the second volume of the book: Quantum Energetics, vol. 2. New energy and space technologies. Before then, I would be happy if the theory of Superunification becomes the property of the world scientific community.

The publication of Volume 2 was postponed by me until better times.

Read more:

[1] V. S. Leonov. Quantum Energetics. Volume 1. Theory of Superunification. Cambridge International Science Publishing, 2010, 745 pgs.

[2] V.S. Leonov. Quantum Energetics: Theory of Superunification. Viva Books, India, 2011.

[3] Download free. Leonov V. S. Quantum Energetics. Volume 1. Theory of Superunification, 2010. http://leonov-leonovstheories.blogspot.com/2018/04/download-free-leonov-v-s-quantum.html [Date accessed April 30, 2018].

[4] Vladimir Leonov. http://vixra.org/author/vladimir_leonov