

Conclusion

Excluding a nuclear war and any unforeseen collapse of the civilization then world requirements in energy would be probably considerably higher than those determined by a general extrapolation. We base our prediction on three observations: a lot of people all over the world suffer from starvation; a lot of people all over the world suffer from poverty; a lot of people all over the world suffer from environment pollution.

Seaborg G. T., Corliss W. R. Man and Atom: Building a New World Through Nuclear Technology, Dutton and Co., Inc., New York, 1971

The age of mineral resources energy will probably end in the nearest future. And it is evident that humanity will thoughtlessly burn in its cars a half of extracted oil and gas. That grim conclusion is based on the main incontestable fact: the quantity of the mineral resources on Earth is limited and the resources are irreplaceable. If we estimate it in $Q = 10^{21}$ watt-second, then the world resource of oil and gas equals $10Q$ each, while there is approximately 20 times more coal, about $200Q$. In 1960 the world energy consumption was equal $0.1Q$ per year; in 1975 it was about $0.4Q$ per year. It is assumed now that every 10 years the energy consumption is doubled. It is easy to calculate when the energetic Apocalypse will begin. Hopes for both hot and cold nuclear fusion nowadays are quite frail. That is shown at some relative graph, its concrete shape of course may be disputed but in general it seems to be absolutely correct.

The block curve is the energy to be obtained from minerals. The broken curve is the possible forecast, if the main idea of that works appears to be true. The deceleration of energy consumption growth is due to the world restriction on energy generation caused by the heat pollution of the environment and by CO₂ emission. That will put a serious ecological obstacle in the development of the civilization. The question is that in the process of energy liberation only one third of the heat energy obtained burning the mineral fuel is transformed into the power energy. The other two thirds have to be wasted in the form of heat in the environment. And in the long run about 99% of the total generated energy is again transformed into heat. Eventually we have a vast garbage heap of energy.

If the ideas described here were true then we would have a lot of free space at the heat energy garbage heap. More important, it would be possible to prevent the further emission of CO₂, Damocles' sword for civilization. Today UN is seriously putting the questions of limitation of heat and carbonic environment pollution. On the other hand in accordance with the forecasts of the American Administration, the USA is close to a tremendous fuel and energy crisis. They are starting the attempts trying to avoid it. There is no doubt that the expected crisis will be global. Simply the USA State Administration has better foreseen the problem than it happens in other countries. Because of this there is no doubt that any promising scientific direction in the field of new power engineering will be examined and so the authors are confident for their ideas.

As our theory does not contain energy and momentum conservation laws for single micro-processes it makes an absolutely new approach to the development of new energy sources.

The generally accepted quantum theory is not fully adequate with respect to numerous new experimental data, to the series of observable physical processes and phenomena (cold nuclear fusion, nuclear transmutations in plants and

biological objects etc.), and becomes today, in our opinion, an obstacle on the way of new energetic. Besides, this theory does not describe, in principle, individual quantum events, but our approach allows to describe such events and shows the way of using redundant energy for the commonwealth. We wish to express our conviction that the time of the theoretical recognition and the practical use of over unity devices will soon come. The peoples of our planet will regret that so much oil, coal and gas was burned causing terrible ecological losses.

It is possible on the other hand that the appearance of new field basis may become decisive for the science in all problems of strong interactions and mass spectrum that turned out to be inaccessible during the whole century. And the question is not that the modern theoretical physics is not able to solve some non-linear equations. For the time being the standard approach just does not allow to formulate the problem of computation of the mass spectrum of an elementary particle.

It is hard to assume the attitude of experts in quantum science to our guerrilla acts on the home front of it. It may be the dramatic situation forecasted by R. Feynman in his work “Character of Physical Laws”: The astronomers of Maya Civilization were able to calculate the moments of sun and lunar eclipse with a great accuracy. They had special mnemonic rules and mathematical tables made up for these purposes. And they successfully used these tables.

Assume, R. Feynman says, that a modern third year student of celestial mechanics comes to these astronomers and says: *“Look, maybe everything is nothing of this kind, maybe the Moon, the Earth and other planets are big stone balls revolving around the Sun, maybe they periodically overshadow it and that is the reason for eclipses?”* And the Maya astronomers answer: *“Are you able with your theory foreseen exactly the moments of eclipse beginning? No? Go away!”*

The UQT is extremely simple and understandable science in its concept. The fact that equations appearing are non-linear is not an obstacle in quantum problems solution. The World is appeared to be mathematically complicated and non-linear. And the Golden Age of linear differential equations with general analytical solution probably has gone away irretrievably. Maybe some of our ideas are paradoxical and heretical, but only the time is able to answer the question whether the Nature proceeds in the way we have assumed.

Probably the authors have omitted some important results, appealed not to discoverers of that or other direction and even have forgotten to allude to somebody. We make our apologies.

References

- [1] Sapogin L. G. "Unitary Field and Quantum Mechanics". In: Investigation of systems. Academy of Sciences of the USSR, Vladivostok, No 2, p. 54-84, 1973 (in Russian).
- [2] Sapogin L. G. "On Unitary Quantum Mechanics". *Nuovo Cimento*, vol. 53A, No 2, p.251, 1979.
- [3] Sapogin L. G. "A Unitary Quantum Field Theory". *Annales de la Fondation Louis de Broglie*, vol.5, No 4, p.285-300, 1980.
- [4] Sapogin L. G. "A Statistical Theory of Measurements in Unitary Quantum Mechanics". *Nuovo Cimento*, vol.70B, No 1, p.80, 1982.
- [5] Sapogin L. G. "A Statistical Theory of the Detector in Unitary Quantum Mechanics". *Nuovo Cimento*, vol. 71B, No 3, p.246, 1982.
- [6] Boichenko V. A. and Sapogin L. G., "On the Equation of the Unitary Quantum Theory". *Annales de la Fondation Louis de Broglie*, vol.9, No3, p. 221, 1984.
- [7] Sapogin L. G. and Boichenko V. A., "On the Solution of One Non-linear Equation", *Nuovo Cimento*, vol.102B, No 4, p.433, 1988.
- [8] Sapogin L. G. and Boichenko V. A., "On the Charge and Mass of Particles in Unitary Quantum Theory", *Nuovo Cimento*, vol. 104A, No 10, p.1483.
- [9] Sapogin L. G. "Clear cut picture of micro worlds". *Journal Technic for the Young (Tekhnika Molodezhi)*. Moscow, No 1, p.41, 1991 (in Russian).
- [10] Epicurus, "Letters to Herodotus", 62 Sankt-Peterburg, 1907.
- [11] Jacobi H., "Atomic Theory" (Indian) *Encyclopedia of Religion and Ethics*, vol.2, p.202, 1909, Edinburg.
- [12] Maimonides M., "The Guide for Perplexed", 1.73.6, NY, 1946.
- [13] Reichenbach H., "The direction of time", University of California Press, Berkeley and Los Angeles, 1956.

- [14] Darwin C. G., Proc. Roy. Soc. A117, 258, 1927.
- [15] Sapogin L. G., Sapogin V. G. Space Dispersion Lines Space Research Equipment p.43-58, Nauka, Moscow, 1973.
- [16] O. Costa de Beauregard, "Theorie Synthetique de la Relativite Restreinte et des Quanta", (Gauthier-Villars, Paris, 1957).
- [17] Heisenberg W., "Introduction to the Unified Field Theory of Elementary Particles" (Interscience, London, New York, Sydney, 1966.)
- [18] Feynman R., Hibs A., "Quantum Mechanics and Path Integrals", McGraw-Hill, New York, 1965.
- [19] James D. Bjorken, Sidney D. Drell, "Relativistic Quantum Fields", Mc Graw-Hill Company, 1976.
- [20] Barashenkov V. S., Sapogin L. G. "Soliton like Solution of linear differential equation" Report in International Conference "Mathematical and Computer Physics", May, 1996, Dubna, Joint Institute of Nuclear Research, Russia.
- [21] Sapogin V. G.. «Mechanisms of Holding Substance with Self-Consistent Field » Publishing House of the Taganrog Radiotechnical University, p. 254, 2000.
- [22] Kantor I. L., Solodovnikov A. S., Hypecomplex numbers (in Russian), Nauka, Moscow, 1973.
- [23] Zaitsev G. A., "Algebraic Problems of Mathematical Physics" (in Russian), Moscow, 1974.
- [24] Morse P. M., Feshbach H. «Methods of Theoretical Physics», part 1 & 2, Mcgraw-Hill Book Company, Inc. 1953.
- [25] Bohm D. "Quantum Theory", New York Prentice-hall, Inc. 1952.
- [26] Gasiorowich S., "Elementary Particle Physics", John Wiley & Sons, Inc, 1967.
- [27] Heisenberg W., "Physics and Philosophy", (Harper and Brothers) New York, p.89, 1958.
- [28] Alexandrov A. D., Fock V. A., in the collection Philosophical Questions of Modern Physics, (in Russian), AN USSR publishing house, 1956.

- [29] Ul'yanov V. V., *The Ukrainian Physical Journal*, 19, №12, 2046, 1974.
- [30] Janossy L., *Acta Physica* 1, 423, 1952.
- [31] Brown R., Twiss R., *Proc. Roy. Soc.*, A243, 291, 1957.
- [32] Rebka G., Pound R., *Nature* 180, 1035, 1957.
- [33] Klauder J. R., Sudarshan E. C. G., "Fundamentals of Quantum Optics", W. A. Benjamin, Inc., New York, Amsterdam, 1968.
- [34] Journal "New Scientist", October 14, # 2260, 2000.
- [35] Humphrey J. Maris, "On the Fission of Elementary Particles and the Evidence for the Fractional Electrons in Liquid Helium", *Journal of Low Temperature Physics* vol.120, page 173, 2000.
- [36] Clauser J. F., Shimony A., "Bell's theorem: experimental tests and implications", *Rep. Prog. Phys.* vol. 41, page 1881-1927, 1978, printed in Great Britain.
- [37] Horne M. A., Shimony A., Zeilinger A., *Phys. Rev. Lett.* vol.62, p.2209, 1989.
- [38] Greenberger D. M., Horne M. A., Shimony A., Zeilinger A., *Am. J. Phys.* vol. 58, p. 1131, 1990.
- [39] Shimony A., *Sc. Am.* vol 2, page 258, 1988.
- [40] Dontsov Yu. P., Baz A. I., *JETP*, 52, 1, 1967.
- [41] Biebermann L., Sushkin N., Fabrikant V., *Comptes Rendus (Doklady) AN SSSR*, 66, 185, 1949.
- [42] Marcov M., "Problem of Theoretical Physics", collection dedicated to N. N. Bogolubov (in Russian) Moscow, 1967.
- [43] Rutherford E., *Pop. Sci. Monthly*, N. Y. 77, 5, 1905.
- [44] Slensack O., "Pridnestrovye's Charnockites and some General Questions of Petrology" (in Russian) (Acad. Sc. USSR, Kiev, 1961).
- [45] Feynman R., "The Character of Physical Law" (Cox and Wyman Ltd, London, 1965).

- [46] Peterson W. W., Birdsall T. G. and Fox W. C., Trans. IRE, PGJT, #4, 1954.
- [47] Mesyats G. A.. «Ecton – Avalanche of Electrons from Metal», “Success of Physical Sciences”, vol. 165, pp. 601-626, 1995.
- [48] Shoulders Kenneth, “EV: A Tale of Discovery”, Jupiter Technology, Austin, TX, 1987.
- [49] Shoulders Kenneth, US Patents 5, 018, 180; 5, 123, 039, (CI.378/119) “Energy Conversion Using High Charge Density” May 21, 1991 and June 16, 1992.
- [50] Shoulders Kenneth, Shoulders Steve, “Observation on the Role of Charge Clusters in Nuclear Cluster Reactions”, J. New Energy, vol.1, no 3, pp 111-121 Fall 1996.
- [51] Fox Hal & Shang Xian Jin, “Low-energy Nuclear Reactions and High-density Charge Clusters”, J. New Energy, vol.3, No 2/3, pp 56-67, 1998.
- [52] Sapogin L. G., Buslaev A. P. Report in International Conference “Modern Trends in Computational Physics, Joint Institut of Nuclear Research, LCTA, Dubna, Russia, June 15-20, 1998.
- [53] Sapogin L. G. “Deuteron Interaction in Unitary Quantum Theory”, and “On the Mechanisms of Cold Nuclear Fusion”. In: Proceedings of the Forth International Conference on Cold Fusion, vol.4, Theory and Special Topics Papers TR-104188-V4, July 1994, p.171-178, Hawaii. 1994.
- [54] Sapogin L. G. “Deuterium Interaction in Unitary Quantum Theory”, and “On the Mechanisms of Cold Nuclear Fusion”. In: Fusion Source Book. International Symposium on Cold Nuclear Fusion and Advanced Energy Sources, Belarussian State University, Minsk, May 24-26, p.91-98. 1994.
- [55] Sapogin L. G. “Cold Nuclear Fusion and Energy Generation Processes in Terms of the Schroedinger Equation”. Chinese Journal of Nuclear Physics vol. 19, #2, p.115-120, 1996.
- [56] Sapogin L. G. «Cold Nuclear Fusion and Energy Generation Processes in Terms of the Schroedinger Equation». Infinite Energy, E. Mallove- editor, vol. 1, No 5, 6, p.75-76, 1996.
- [57] Sapogin L. G. «Energy Generation Processes and Cold Nuclear Fusion in Terms of the Schroedinger Equation». In: Proceedings of the Sixth International

- Conference on Cold Fusion, Progress in New Hydrogen Energy, October 13-18, 1996, Japan, vol. 2, p.595-600.
- [58] Sapogin L. G. "Energy Generation Processes in Terms of the Schrodinger Equation". Proceedings of the 2 Russian Conference CNFNT (in Russian) p.18-24, Sochi, September 19-23, 1994.
- [59] Mukhin K. N.: "Experimental Atomic Physics". Vol. 1, 2 (Moscow, Russia, 1974).
- [60] Potapov Yu. S. Patent of the Russian Federation No 2045715 "Heat Generator and the Device for Heating of Liquids". Registered on the 10-th of October 1995; priority from the 26-th of April 1993 (in Russian).
- [61] Potapov Yu. S. "Water as a Source of Life and Energy". *Enerjia-takarekossadi, Revu.* p.25-29, September 1998, Budapest.
- [62] Potapov Yu. S., MD, Patent No 649 "Instalatie pentru obtinerea enerjiei electrice si-termice. Buletin Oficial de Proprietate Industriala", No12, p.18-19, Chisinau (in Moldavian).
- [63] Samgin A., Baraboshkin A. et al. "The influence of conductivity on neutron generation process in proton conducting solid electrolytes", In: Proceedings of the 4th International Conference on Cold Fusion. Palo Alto, USA, v.3, p.51-57, 1994.
- [64] Samgin A. "Cold fusion and anomalous effects in deuteron conductors during stationary high-temperature electrolysis", In: Proceedings of the 5th International Conference on Cold Fusion. April 9-13, 1995, Monte-Carlo, p.201.
- [65] Mizuno T., Enio M., Akimoto T. and K. Azumi "Anomalous heat evolution from SrCeO₃-type proton conductors during absorption/desorption of deuterium in alternate electric field", Proceedings of the 4th International Conference on Cold Fusion, December 6-9, 1993, Hawaii, vol. 2, p.14., EPRI, Palo Alto, USA, 1994.
- [66] Patterson J. A. System for electrolysis, U.S. patent No 5, 494, 559, 27 Feb.1996; Miley G. H. and J. A. Patterson in: Proceedings of the 6th International Conference on Cold Fusion, Progress in New Hydrogen Energy, October 13-18, 1996, Japan, vol. 2, p.629-644.
- [67] Tinsley C. "Water fuel device conquers the marketplace!" *Infinite Energy*, vol. 1, No 2, p.33-37, 1995.

- [68] Griggs J. "Calorimetric study of excess heat production within the hydrosomic pump system using light water". Fusion Source Book. International Symposium on Cold Fusion and Advanced Energy Sources, Belarussian State University, Minsk, Belarus, May 24-26, p.248-253, 1994.
- [69] Huffman M. T. "From a sea of water to a sea of energy", Infinite Energy, vol.1, No 1, p.38-45, 1995.
- [70] V. M. Galitsky, B. M. Karnaov, V. I. Kogan, Problems in Quantum Mechanics, (in Russian), Moscow, Nauka, 1981.
- [71] Fleischmann M., Pons S. Electroanal. Chem., v.261, p.301, 1989.
- [72] Sapogin L. G., Journal «Technics for a young», No. 1, стр.41, 1983. (Russian).
- [73] Sapogin, L. G. and I. V. Kulikov "Cold Nuclear Fusion in the Unitary Quantum Theory», Chinese Journal of Nuclear Physics, vol. 17, No 4, p.360-370, 1995.
- [74] Cryz W.: Rivista Nuovo Cimento, 1, Special No, 42, 1969.
- [75] Kervran Lois C. "Biological Transmutations", Swan House Pub. Co, NY, 11223, 1972.
- [76] Alan Hibson, privet communication in 1993.
- [77] Notoya R., Noya Y., Ohnisi T. Fusion Technology. vol. 26, p.179-183, 1993.
- [78] Swartz M. Journal of New Energy vol.1, #3, 1996.
- [79] Blokhintsev D. I. "On the Energy Conservation Law", In: "Works on the methodological problems of physics", p.51, 1993, Print of Moscow State University. (In Russian).
- [80] Schwinger J. Casimir "Energy for Dielectric". In: Proceedings of the National Academy of Sciences, vol.87, p.8370-8372, 1990, "Cold Fusion: does it have a future?" Journal "Cold Fusion", vol. 1, #1, page 14-17, 1994.
- [81] Sapogin L. G. How can our energetics look like in the future millenium Journal Business-Match, №4, 1998 (In Russian).
- [82] Sapogin L. G. "On one of the Energy Generation Mechanisms in Unitary Quantum Theory", Infinite Energy, E. Mallove,-editor, vol. 1, No 2, p.38-39, 1995.

- [83] Sapogin L. G. "On one of the Energy Generation Mechanisms in Unitary Quantum Theory", Proceedings of the ICCF5, p. 361, April 9-13, 1995, Monte Carlo.
- [84] Sapogin L. G. "Energy Generation Processes and Cold Nuclear Fusion in Terms of the Schroedinger Equation", In: Proceedings of the Sixth International Conference on Cold Fusion, Progress in New Hydrogen Energy, October 13-18, 1996, Japan, vol. 2, p.595-600.
- [85] Sapogin L. G., "On one of the Energy Generation Mechanisms in Unitary Quantum Theory". Proceedings of the 2 Russian Conference CNFNT (in Russian) p.18-24, Sochi, September 19-23, 1994; Cold Fusion, No 11, p.10, 1995.
- [86] Sapogin L. G., "On one of the Energy Generation Mechanisms in Unitary Quantum Theory". Cold Fusion, No 11, p.10, 1995.
- [87] Correa Paulo and Correa Alexandra "XS NRG in Technology", Infinite Energy, vol.2, #7 p.18-38, Nr 8 p.10-15, #9 p.33-37, 1996. US Patents, numbers: 5.416.391, 5.502.354, 5.449.989.
- [88] Sapogin L. G. "The Theory of Excess Energy in PAGD reactor (Correa reactor)". In: Proceedings of ICCF-7, Vancouver, April 1998; Infinite Energy, No 20, 1998, p.49.
- [89] Mallove E. F. "Fire from Ice". John Wiley & Sons, Inc. 1991.
- [90] Sapogin L. G. "New source of energy?" Journal "Acknowledgement and Physical Reality", Moscow, vol. 2, #1, page 34-40, 1997, (in Russian).
- [91] Tinsley C. "Energy Bombshell from Moldova", and "Water Fuel Device of Conguestene Market Place". In: Infinite Energy, vol. 1, p.38-45, 1993.
- [92] Swe-Kai Chen, Chu-Yung Liang «Observation of Cell Temperature Drops». In: Proceedings of ICCF-7, Vancouver, April 1998, p.68-72.
- [93] Jakimenko L. M. "Electrolysis of Water". Chimia Press, Moscow, p.p. 33, 86, 90-114, (1970) (in Russian).
- [94] Pfleiderer N. "Electrolysis of Water". p.p. 12, 17-18, 1935, Leningrad (in Russian).
- [95] Rothwell J. "Yasunori Takahashirs Supermagnets", Infinite Energy, vol. 1, No 5, 6, p.33, 1996.

- [96] Sapogin L. G. "Is This Really True?", Infinity Energy, N 28, 2000.
- [97] Sapogin L. G. Perpetuum mobiles working in Switzerland, Miracles and Adventures, (in Russian), # 2, 2000.
- [98] Sapogin L. G. They say there are no perpetuum mobile. Then what's this? The Samolyot magazin, № 4, 2000.
- [99] Frauenfelder H. and Henley E.: "Subatomic Physics" (New Jersey, 1974).
- [100] Tribute to Nicola Tesla (presented in articles, letters, documents). 1961, Beograd.
- [101] Tandberg R., "On the Cathode of an Arc Drawn in Vacuum", Physical Review 35, p.1080, 1930.
- [102] Reich W. "The Geiger Muller Effect of the Orgone", published in the "Oranur Experiment" 1947.
- [103] Chernetsky A. V., Plasma systems with separation of electric charges, Moscow, VINITI report № 4003-83, 15.07.83).
- [104] Sapogin L. G. Report «UQT and new source of energy» for Honda company 1997.
- [105] Esaki L., Tsu R., "Superlattice and Negative Conductivity in Semiconductors", IBM J. Res. Note, RC-2418, March 1969.
- [106] Sapogin L. G. On the influence of the electron emission in the hole semiconductor on the value of the autoelectronic emission, Izvestia VUZov, Physics, 4, 1963.
- [107] Michael Shur, "Physics of Semiconductor Devices", Prentice-Hall International, Inc, 1990.
- [108] Sakaki H., Proceeding of 15th International Conference on Solid State device and Materials, Tokyo, Japan, 1983.
- [109] Luryi S., Capasso F., Appl. Phys. Lett. 47, p.1347-1349, 1985.
- [110] Kushida T., Geusic J. E., "Optical refrigeration in Nd-doped yttrium aluminium garnet", Phys. Rev. Lett. V. 21, #6, p.1172-1175, 1968.
- [111] Yatsiv S., "Anti-Stokes fluorescence as a cooling process", Advanced in Quantum Electronics, -N. Y., p.200-213, 1961.

- [112] Tsujikawa I., Murao T., "Possibility of optical cooling of ruby", J. Phys. Soc. Japan, v. 18, #4, 1963.
- [113] Jean-Philippe Bouchaud, Albrecht Ott, Dominique Langevin, Vladimir Urbach, "Les" Vols de Levy "on la diffusion non brownienne", Journal La Recherche Mars, No 230, Vol. 22, page 378-380, 1991.
- [114] Kasagi J., Yamazaki H., Kasajima N., Ohtsuki T., Yuki H. "Bremsstrahlung in α -decay of ^{210}Po and ^{244}Cm : Are α -particles emitting photons in tunneling?" Preprint, October, 1996.
- [115] Liharev K., Klaeson T.. Scientific American, #8, 1992.
- [116] Chukova Y. P., The anti-Stokes luminescence and its applications, (in Russian), Moscow, Sovetskoe Radio, 1980.
- [117] Uhler A., "Electrolitic Shaping of Germanium and Silicon", Bell Syst. Tech. v. 35, #2, p.333-347, 1956.
- [118] Canham L. T., "Silicon Quantum Wire Array Fabrication by Electrochemical and Chemical Dissolution of Waters", Appl. Phys. Lett. v.57, #10, p.1046-1048, 1990.
- [119] Bsiesy A., Vial J. C., Gaspard F. et al, "Photoluminescence of High Porosity and Electrochemically Oxidized Porous Silicon Layers", Surface Science, v. 254, #1, p.195-200, 1991.
- [120] Kashkarov P. K., Timoshenko V. Y., On the recombination of charge carriers in porous silicon, Physics and Technics of Semiconductors, (in Russian), v. 28, no.1, p.100-103, 1994.
- [121] Kashkarov P. K., Timoshenko V. Y. et al, On the structural and the electronic properties of the surface of porous silicon obtained by the chemical etching. Proceedings of the 22nd conference on the emission electronics, (in Russian), Moscow, v. 1, p.98-100, 1994.
- [122] Ditrich Th., Konstantinova E. A., "Influence of Molecule Adsorption on Porous Silicon Photoluminescence", Thin Solid Films, v. 255, p.238-240, 1995.
- [123] Sapogin L. G. "XXI century - new sources of energy?", In: Chudesa i prikliuchenija, Moscow, No 11, p.32-35 (In Russian) 1996, and No 3, 1998.
- [124] Sapogin L. G., Kulikov I. V. "Neue Quantenfeldtheorie und prozesse zur

- electromagnetischer und thermischer energie mit overunity effekt”, DVR-Mitglieder-Journal 2/2000.
- [125] Sapogin L. G. “The 21-th century will it bring a new quantum picture of the universe and new energy sources?”, Journal of New Energy, vol.2, #3/4, 1999.
- [126] C. E. Ciolkowsky, On the second Law of Thermodynamics, (in Russian), Kaluga, 1914.
- [127] The Heat Theory in the Elementary Presentaton of C. Maxel, a collection, part 163, Kiev, 1888.
- [128] Maxwell J. C., Moleculer “Nature” #8 (May 1873-Oct 1873).
- [129] R. V. Paul, Mechanics, Acoustics, The Heat Theory, (in Russian), GITTL, Moscow, 1957.
- [130] J. Thomson, The Spirit of Science, (in Russian), Znanie, Moscow, 1970.
- [131] Feynman R. P., Leighton R. B., Sands M. “The Feynman Lectures on Physics”, Addison-Wesley Publishing Company, Inc, Palo Alto, London, 1963.
- [132] Feynman R. P., “The Theory of Fundamental Processes”, California Institute of Technology, W. A. Benjamin, Inc. New York, 1961.
- [133] Feynman R. P., “Photon-Hadron Interactions”, California Institute of Technology, W. A. Benjamin, Inc., Reading, Massachusetts, 1972.
- [134] Zubarev D. N., The non-equilibrium statistical thermodynamics, (in Russian), Nauka, Moscow, 1971.
- [135] Vulkalovich M. P., Novikov I. I., Thermodynamics, (in Russian), Mashinostroenie, 1972.
- [136] Poplavsky R. P., Soviet Physical Surveys (Uspekhi), v. 128, no.1, p.165, 1979.
- [137] Yakovlev V. F., A course in Physics, (Heat and Molecular Physics), (in Russian), Prosveshchenie, Moscow, 1976.
- [138] Kittel Charles, “Thermal Physics”, John Wiley and Sons, Inc, New York, 1970.
- [139] L. Boltzmann, Lectures on the Gas Theory, (in Russian), Moscow, GITTL, 1956.

- [140] Prigogine I., Time, Structure, and Fluctuations, (in Russian), Soviet Phys. Surveys (Uspekhi) v 131, n 2, p 185, 1980.
- [141] Volod'ko Y. I., The laminary flow of compressed air into the atmosphere and fuelless monothermic engine, (in Russian), The Scientific Journal of JFRM, n 1-12, Moscow, Obshchestvennaya Pol'za publishers, 1998.
- [142] Sapogin L. G. On the change of the heat conductivity of a semiconductor under the effect of the current, Izvestia VUZov, Physics, no 4, 1964. (Russian)
- [143] Tandberg R., "On the Cathode of an Arc Drawn in Vacuum", Physical Review 35, p.1080, (1930).
- [144] Bond G. C., Chem. Prod. vol.18, #8, p.300, 1955.
- [145] Mittasch A., Z. Electrochem. vol.36, p.561, 1930.
- [146] Mendeleev D. I., Collected Works, v 15, p. 345-354, 444-448, 600-612, 1949, AN USSR publishers.
- [147] Balandin A. A., The multiplet theory of Catalysis, (in Russian), MGU publishers, 963
- [148] Kharin A. N., Kataeva N. A., Kharina L. T., A Course of Chemistry, (in Russian), Moscow, Vysshaya Shkola, 1975.
- [149] Dickson M., Webb E., Ferments, (in Russian), IL, Moscow, 1957.
- [150] Ivansky V. I., Catalisys in the Organic Chemistry, (in Russian), Leningrad, LGU publishers.
- [151] Waters E., The Chemistry of Free Radicals, (in Russian), IL, Moscow, 1948.
- [152] Beylis V., The Nature of the Action of Enzymes, (in Russian), Moscow-Leningrad, 1927.
- [153] Ashmore P., Catalysis and Inhibition of Chemical Reactions,(in Russian), Moscow, Mir, 1956.
- [154] Panos T. Pappas "Electrically induced nuclear fusion in the living cell", Journal of New Energy vol. 3, #1, 1998.

- [155] M. Sue Benford, R. N. M. A. “Biological nuclear reactions: Empirical data describes unexplained SHC phenomén” *Journal of New Energy* vol. 3, #4, 1999.
- [156] Shang Xian Jin & Hal Fox, “Characteristics of High-Density Charge Clusters: A Theoretical Model”, *Journal of New Energy* vol. 1, No 4, pp 5-20, Winter 1996.
- [157] Shang Xian Jin & Hal Fox, “High-Density Charge Clusters Collective Ion Accelerator”, *Journal of New Energy*, vol. 4 No 2, pp 96-104, Fall 1999.
- [158] Sapogin L. G., Ryabov Yu. A., Graboshnikov V. V., “New Source of Energy from the Point of View of Unitary Quantum Theory”, *Journal of New Energy Technologies*, published by Faraday Laboratories Ltd, issue #3(6), 2002.
- [159] Sapogin L. G., Ryabov Yu. A., Graboshnikov V. V., “New Source of Energy from the Point of View of Unitary Quantum Theory”, *Journal of New Energy*, vol. 6, #2, 2001.
- [160] Sapogin L. G., Ryabov Yu. A., “Spontaneous Polarization of some Glasses and Inexhaustible Energy Source of Direct Current”. *Journal of New Energy Technologies*, published by Faraday Laboratories Ltd, № 9, 2003.
- [161] Poincare A. “Sur la Dynamique de l’électron”, *Coll. Works*, v. 3, pp.433-515, Moscow, “Science”, 1974, (Russian, transl. from French).
- [162] Sapogin L. G., Ryabov Yu. A. (2008), “On the mass spectrum of elementary particles in Unitary Quantum Theory”, *Journal “The old and new Concepts of Physics”*, Vol. V, No. 3, www.uni.lodz.pl/concepts.
- [163] Liu W., M. G. Boshier, S. Dhawan, O. van Dyck, P. Egan, X. Fei, M. G. Perdekamp, V. W. Hughes, M. Janousch, K. Jungmann, D. Kawall, F. G. Mariam, C. Pillai, R. Prigl, G. zu Putnitz, I. Reinhard, W. Schwarz, P. A. Thompson, and K. A. Woodle, (1999), *Phys. Rev. Lett.* v. 82, 711.
- [164] Sapogin L. G., Ryabov Yu. A. (2010). «New Theoretical Results about the Mass Spectrum of Elementary Particles» *Applied Physics Research*, vol. 2, No 1, p.86-98, May. www.ccsenet.org/apr
- [165] Sapogin L. G. (2010), “About Unitary Quantum Field Theory” *Applied Physics Research*, vol. 2, No 2, p.114-140, November. www.ccsenet.org/apr
- [166] Sapogin L. G. (2011), “An Unitary Unified Quantum Field Theory” *Global*

Journal of Science Frontier Research, vol. 11, Issue 4, Version 1.0, July.

- [167] Sapogin L. G., Ryabov Yu. A., Dzhanibekov V. A. (2012), "Problems in the Unitary Quantum View of the World" International Journal of Applied Science and Technology, Vol. 2, No. 5, May. www.ijastnet.com
- [168] Sapogin L. G., Dzhanibekov V. A. (2012), "Object Lessons of the Unitary Quantum Theory" Journal of Modern Physics and Applied, Vol., No. 1 page 1-22, <http://scik.org>
- [169] Wang L. J. etc. (2000). "Gain-assisted superluminal light propagation", Nature, 406, p.277-279.
- [170] Sapogin L. G., Ryabov Yu. A., Utchastkin V. I. (2003). Unitary Quantum Theory and a New Energy Sources. Ed. MADI, Moscow, (Russian).
- [171] Sapogin L. G., Dzhanibekov V. A., Ryabov Yu. A. (2014), "General Problems of Sciences", International Journal of Sciences, Vol.3, #1.
- [172] Sapogin L. G., Ryabov Yu. A. (2011). "Approximation Equations with oscillating charge in Unitary Quantum Theory and its applications to the analysis of some quantum problems." International Journal of Applied Science and Technology, Vol.1, No 5, September.www.ijastnet.com
- [173] Sapogin L. G., Ryabov Yu. A. (2011). Unitary Quantum Theory and Catalytic Process Theory. International Journal of Pure and Applied Sciences and Technology 3(2), pp.93-120 www.ijopaasat.in
- [174] Sapogin Leo G., Dzhanibekov V. A., Ryabov Yu. A. (2013) "Relativistic Problems in the Unitary Quantum View of the World" in collection "Unsolved Problems in Special and General Relativity" Education Publishing ISBN: 9781599732206 ©American
- [175] Sapogin L. G., Dzhanibekov V. A., Ryabov Yu. A., (2012), "Problems in the Unitary Quantum View of the World" International Journal of Applied Science and Technology, Vol. 2, No. 5, May. www.ijastnet.com
- [176] Sapogin L. G., Dzhanibekov V. A. (2012), "Object Lessons of the Unitary Quantum Theory" Journal of Modern Physics and Applied, Vol., No. 1 page 1-22, <http://scik.org>

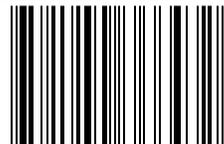
- [177] Sapogin L. G., Dzhanibekov V. A., Ryabov Yu. A. (2014) “The Unitary Quantum Theory and Modern Quantum Picture of the World” Current Trends in Technology and Science vol. 3 issue 4.
- [178] Sapogin L. G., Dzhanibekov V. A., Ryabov Yu. A. (September, 2014) “Modern Trend in Quantum Picture of the World”, SOP Transaction on Theoretical Physics, vol. 1, #4, p.57-91.
- [179] Jammer M. (1961). Concepts of mass in classical and modern physics. Harvard University Press.
- [180] Sapogin L. G., Dzhanibekov V. A. (2008), Journal «Technics for a young», No. 9, 11, February (Russian).
- [181] Sapogin L. G., Ryabov Yu. A. (2010). «New Theoretical Results about the Mass Spectrum of Elementary Particles». Applied Physics Research, vol. 2, No 1, p.86-98, May.
- [182] Sapogin Leo G., Boichenko Victor A. (2013), “Commutation Relations, Relativistic Invariance and Deriving the value of Fine-Structure Constant from Unitary Quantum Theory”, Applied Physics Research, Vol.5, #3.
- [183] Sapogin L. G., Ryabov Yu. A. (2011). “Approximation Equations with oscillating charge in Unitary Quantum Theory and its applications to the analysis of some quantum problems.” International Journal of Applied Science and Technology, Vol.1, No 5, September. www.ijastnet.com
- [184] Sapogin L. G., Dzhanibekov V. A., Sapogin V. G. (2011). “A new approach to control electron current in Unitary Quantum Theory”. International Journal of Applied Science and Technology, Vol.1, No.6, November. www.ijastnet.com
- [185] Sapogin L. G., Ryabov Yu. A. (2011). “Unitary Quantum Theory and Catalytic Process Theory”. International Journal of Pure and Applied Sciences and Technology 3(2), pp.93-120 www.ijopaasat.in
- [186] Sapogin L. G., Dzhanibekov V. A., Ryabov Yu. A., “Contemporary Problems of Sciences in the view of Unitary Quantum Theory”, Global Journal of Science Frontier Research, Volume 14, Issue 1, Version 10, 2014
- [187] Sapogin L. G., Ryabov Yu. A., Dzhanibekov V. A. (2012), “Problems in the Unitary Quantum View of the World” International Journal of Applied Science

- and Technology, Vol. 2, No. 5, May. www.ijastnet.com
- [188] Hlistunov. W., Poduvalcev V. V., Mogilyuk J. G. (2011) Science and Education - pub. Electronic scientific and technical periodic #11, November.
- [189] Tsao Chang, (2013) "Neutrinos as Superluminal Particles" Journal of Modern Physics, 4, 6-11.
- [190] Smarandach Florentin (2012) "New Relativistic Paradoxes and Open Questions", Somipress.
- [191] Smarandach Florentin-Chief Editor (2013)"Unsolved Problems in Special and General Relativity" Education Publishing& Journal of Matter Regularity (Beijing) ISBN: 9781599732206.
- [192] Sapogin L. G., Ryabov Yu. A. (2013) "Low Energy Nuclear Reactions (LENR) - and Nuclear Transmutations at Unitary Quantum Theory", International Journal of Physics and Astronomy, Vol. 1 No. 1.
- [193] Sapogin L. G., Ryabov Yu. A., Dzhanibekov V. A. (2014) "Nuclear Transmutations and Low Energy Nuclear Reactions at the Unitary Quantum Theory" Frontier Research Global Journal of Science Vol. 14 Issue 1 Version 1.0.
- [194] Josef Gruber (2008) Raumenenergie-Technik Michaels Verlag.(in Germany)
- [195] Sapogin L. G., Ryabov Yu. A., (July, 2014) "Solution of the particles scattering problems in UQT by using the oscillating charge equation" International Journal of Applied Science and Technology, vol. 4, #4, p.77-83.
- [196] Sapogin. L. G., Boichenko V. A. "Relativistic Invariance, Commutation Relations and Deriving the Value of the Fine Structure Constant from Unitary Quantum Theory" International Journal of Innovative Research in Science, Engineering and Technology Vol. 2 Issue 4, 2013h
- [197] Sapogin L. G., Ryabov Yu. A. (2011) "About unitary quantum theory and catalytic process theory" Elixir Applied Mathematic No 34.
- [198] Sapogin L. G., Boichenko V. A. "Relativistic Invariance and Commutation Relations at Unitary Quantum Theory" Elixir Nuclear and Radiation Physics No 58, 2013.
- [199] Sapogin Leo G., Ryabov Yu. A. "Low Energy Nuclear Reactions (LENR) - and

- Nuclear Transmutations at Unitary Quantum Theory “International Journal of Physics and Astronomy Vol. 1 No1, December 2013.
- [200] Sapogin L. G., Ryabov Yu. A, Boichenko V. A. (2005). “Unitary Quantum Theory and a New Sources of Energy”, Archer Enterprises, Geneva, NY, USA.
- [201] Sapogin L. G., Ryabov Yu. A, Boichenko V. A. (2008). “Unitary Quantum Theory and a New Sources of Energy”, Moscow, Science-Press (Russian).
- [202] Lyamov V. E, Sapogin L. G. (1968), “Wave packets in medium with dispersion”. Journal Specialnaya Electronics #1, page 17-25. (Russian)
- [203] Vysotskii V. I., Kornilova A. A. (2003) “Nuclear Fusion and Transmutation of Isotopes in Biological Systems”, ed. Mir, Moscow (Russian).
- [204] Fortov V. E. at all (1996) Uspehi Physicheskikh Nauk vol.166, #4, p.391 (Russian).
- [205] Sapogin, L. G., Dzhanibekov, V. A., Mokulsky, M. A., Ryabov, Yu. A., Savin, Yu. P. and Utchastkin, V. I. (2015) “About the Conflicts between the Unitary Quantum Theory and the Special and General Relativity Theories”. Journal of Modern Physics, 6, 780-785. <http://dx.doi.org/10.4236/jmp.2015.66083>.
- [206] L. G. Sapogin, V. A. Dzhanibekov, M. A. Mokulsky, Yu. A. Ryabov, Yu. P. Savin, V. I. Utchastkin. (2015) “The Conflict between the Unitary Quantum Theory and the Special and General Relativity Theories”. International Journal of High Energy Physics. Special Issue: Symmetries in Relativity, Quantum Theory, and Unified Theories. Vol. 2, No. 4-1, 2015, pp. 54. doi: 10.11648/j.ijhep.s.2015020401.14.

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